

COUNTY OF DUMFRIES.

FORTY-FOURTH
ANNUAL REPORT

UPON THE

*Health and Sanitary Condition of
the County.*

1934

AND

Report on School Medical Inspection
and Treatment


For Year ending 31st July, 1935,

BY

JOHN RITCHIE, M.B., Ch.B., M.R.C.P.Ed., D.P.H.,
County Medical Officer.

DUMFRIES :

ROBERT DINWIDDIE, PRINTER AND LITHOGRAPHER.



Digitized by the Internet Archive
in 2016 with funding from
Wellcome Library

<https://archive.org/details/b28649618>

STAFF, 1934.

COUNTY MEDICAL OFFICER AND CHIEF PUBLIC ASSISTANCE OFFICER.
JOHN RITCHIE, M.B., Ch.B., M.R.C.P.Ed., D.P.H.

(1) MEDICAL AND DENTAL STAFF.

Medical Officers.

W. S. I. ROBERTSON, M.B., Ch.B., D.P.H., Assistant County Medical Officer.
E. B. MUNRO, M.B., Ch.B., D.P.H., Lieut.-Col. I.M.S., Assistant Medical Officer and School Medical Officer.
AGNES F. TURNER, M.B., Ch.B., D.P.H., Assistant Medical Officer and School Medical Officer.

Dentist.

AGNES I. DALZIEL, L.D.S.

(2) LABORATORY STAFF.

Bacteriologist.

ED. ARMSTRONG, M.D., B.Sc.

Chemists.

JOHN W. HAWLEY, B.Sc., F.I.C., A.M.I. Chem. E. (Public Analyst)
WM. WILSON, F.I.C.

Laboratory Assistants.

LUCIA CANDLISH.
PHYLLIS BETTS.

(3) VETERINARY AND SANITARY INSPECTORS.

Veterinary Inspectors

F. A. DAVIDSON, B.Sc., M.R.C.V.S. (Resigned).
G. A. SANGSTER, M.R.C.V.S.
A. P. STEELE, B.Sc., M.R.C.V.S., D.V.S.M.

Sanitary Inspectors.

WILLIAM RAE, Cert. Roy. San. Assoc. Scot. (*obit* 9.8.34).
GEO. WILSON, Cert. Roy. San. Assoc. Scot.
WM. CRUICKSHANK, Cert. Roy. San. Assoc. Scot.

(4) HEALTH VISITORS.

LILIAS MONTGOMERY, S.R.N., S.C.M.
JEAN BURNETT.

(5) OFFICE STAFF.

THOMAS WILSON, P.L.D. (Resigned).

JAMES NICOLSON, P.L.D.

(a) *Public Health.*

KATHLEEN CANDLISH.

MARY A. MUIRHEAD (Typist).

VIOLET SCOTT, „

ELEANOR SCOTT, „

RACHEL C. G. GRAHAM, „

(b) *Public Assistance.*

ALEX. KIRKPATRICK, P.L.D.

HENRY G. WILSON.

M. E. B. FARISH (Typist).

JEAN LYON, „

(6) COUNTY ENGINEER.

OSWALD J. BELL, A.M.I.C.E.

(7) LOCAL GOVERNMENT OFFICERS.

JAS. MAIR, Cert. of Roy. San. Assoc.

Scot. ... (1) Dumfries District.

JOHN JACKSON, Cert. of Roy. San.

Instit. ... (2) Thornhill District.

PETER M. ANDERSON, P.L.D. ... (3) Sanquhar District.

ROBERT BELL ... (4) Annan District.

HARRY W. BRYSON ... (5) Gretna District.

WM. CRUICKSHANK, Cert. of Roy. San. }

Assoc. Scot. (Resigned) ... } (6) Lockerbie District.

WM. MOLLISON, Cert. of Roy. San. }

Assoc. Scot. ... }

JOHN SANSON, Cert. of Roy. San. Assoc. (7) Moffat District.

A. A. OLIVER, Cert. of Roy. San. Assoc. (8) Langholm District.

To

The Department of Health for Scotland.

The County Council of Dumfries.

Ladies and Gentlemen,

I have the honour of submitting my Report for 1934, being the Forty-fourth Annual Report on the Health and Sanitary Conditions of the County of Dumfries.

I also submit the Report on School Medical and Dental Inspection and Treatment for the year ending 31st July, 1935.

I am, Ladies and Gentlemen,

Your obedient Servant,

JOHN RITCHIE,

Medical Officer of Health.

INDEX.

VITAL STATISTICS—	Page.
Population	1
Births	1
Deaths	2
Infantile Mortality	4, 29
Maternal Mortality	4, 29
GENERAL CONSIDERATIONS	4
WATER SUPPLIES	5
DISPOSAL OF SEWAGE AND RIVER POLLUTION	8
HOUSING	10
HOUSING (RURAL WORKERS) ACTS	12
INFECTIOUS DISEASES	14
Enteric Fever	15
Scarlatina	15
Diphtheria	18
SCHOOL CLOSURE	21
HOSPITALS	22
AMBULANCES	23
THE SICK POOR	23
VENEREAL DISEASES	23
TUBERCULOSIS	24

	Page.
MATERNITY AND CHILD WELFARE	27
MILK AND DAIRIES	34
MEAT INSPECTION	42
PUBLIC ASSISTANCE	46
OTHER SANITARY WORK	52
SMALL BURGHS	54
LABORATORY REPORTS—	
Chemical	79
Bacteriological	99
MEDICAL INSPECTION OF SCHOOLS	106
DENTAL INSPECTION OF SCHOOLS	126

REPORT

VITAL STATISTICS.

Population.

The Registrar-General's estimate of the population in the County Landward and in the Small Burghs during 1934 is as follows —

(a) County Landward	...	.....	44,672
(b) Burghs—Annan	.....	.....	4,017
Sanquhar	.....	.....	1,792
Lochmaben	.....	.....	1,035
Lockerbie	.....	.....	2,629
Moffat	.....	.....	2,037
Langholm	.....	.....	2,451
Total			58,633

This is an increase of 44 on the total for 1933.

Births.

The numbers of births occurring in the County Landward and in the Small Burghs during 1934 were as follows :—

	Births corrected for transfers	M.	F.	Birth Rate	Per cent of illegitimate births
County Landward	796	403	393		
Burghs—					
Annan	62	28	34		
Sanquhar	21	14	7		
Lochmaben	25	12	13		
Lockerbie	38	21	17		
Moffat	24	11	13		
Langholm	24	14	10		
Total	990	503	487	16.9	11.2

The total is an increase of 56 on that for 1933, and the birth-rate—16·9—is 1 per 1000 higher.

Illegitimate births number 11·2 per cent. of the total, this being 0·5 per cent. below the figure for the previous year. The illegitimate rate for Scotland was 6·9 per cent.

Deaths.

The number of deaths in the County and Small Burghs, corrected for transfers “in ” and “ out,” was 801 (males 394, females 407). The death-rate, corrected and adjusted for age and sex distribution, was 12·1 per 1000, which is 0·4 per 1000 below that of last year.

The numbers, causes, and age-periods of deaths are shewn in the following table, arranged under the headings of the Short List of the Intermediate International List of Causes of Death as adapted for use in Scotland :

	All ages	-1	1-	5-	10-	15-	25-	35-	45-	55-	65-	75-	85-
Measles	3	...	2	...	...	...	...	1	...	...	...	...	...
Scarlatina	4	1	2	...	...	1	...	...	...	...	...	...	...
Diphtheria	5	...	2	2	...	...	...	...	...	...	...	1	...
Influenza	9	1	...	...	...	...	...	...	2	1	2	2	1
Cerebro-Spinal Fever	1	...	1	...	...	...	...	...	...	...	...	...	...
Other Epidemic Diseases	6	...	...	...	...	...	...	1	1	2	1	1	...
Respiratory Tuberculosis	29	...	...	...	2	2	9	7	2	4	3	...	...
Other Tuberculous Disease	12	1	2	1	1	1	3	...	1	2	...	...	...
Other Infectious and Para- sitic Diseases	1	...	...	...	...	...	...	...	...	...	1	...	...
Cancer (Malignant Disease)	95	...	...	...	...	...	1	5	6	23	38	21	1
Diabetes Mellitus	14	...	...	...	...	...	...	...	1	3	8	2	...
Other General Diseases	24	...	2	...	1	1	...	...	4	9	4	3	...
Cerebral Hæmorrhage	93	...	...	...	...	...	...	...	3	16	33	34	7
Other Diseases of Nervous System and Sense Organs	22	4	2	...	...	4	2	...	1	6	...	3	...
Heart Disease	194	...	1	...	...	3	3	3	8	29	67	65	15
Other Circulatory Diseases	15	...	...	...	...	...	...	...	1	3	3	4	4
Bronchitis	38	5	...	...	...	...	...	1	2	4	11	13	2
Pneumonia (All Forms)	32	7	4	1	...	...	3	3	2	2	4	4	2
Other Respiratory Diseases	10	...	...	...	...	1	...	1	1	3	2	2	...
Gastric and Duodenal Ulcer	8	...	...	...	...	...	...	1	3	3	...	1	...
Diarrhœa (All Ages)	3	2	...	...	...	...	...	...	1	...	...	...	...
Appendicitis	4	...	...	...	1	...	...	...	1	1	1	...	...
Cirrhosis of Liver	1	...	...	...	...	...	...	...	...	...	1	...	...
Other Diseases of Liver	2	...	...	...	...	...	1	...	...	...	1	...	...
Other Digestive Diseases	16	2	2	...	...	...	2	2	2	...	2	3	...
Acute and Chronic Nephritis	27	...	...	...	...	...	1	1	4	2	8	10	1
Other Diseases of the Genito- Urinary System	9	...	...	...	...	1	...	...	1	...	3	4	...
Puerperal Sepsis	2	...	...	...	...	...	2	...	...	...	...	...	...
Other Puerperal causes	6	...	...	...	1	1	3	1	...	...	...	...	...
Diseases of Skin and Loco- motor System	5	...	...	...	...	1	...	...	...	2	1	1	...
Congenital Debility, Prema- turity, Malformations	40	39	1	...	...	...	...	...	...	...	...	...	...
Old Age	29	...	...	...	...	...	...	...	...	...	3	19	7
Suicide	5	...	...	...	...	...	1	3	...	...	1	...	...
Other Violence	24	...	...	2	...	3	2	...	5	4	2	4	2
Ill-Defined or Unknown	14	..	2	...	...	...	...	...	...	2	8	2	...
All Causes	801	62	23	6	6	19	33	30	52	121	208	199	42

Of the 801 deaths, 62 were of infants aged less than 1 year. The infantile mortality-rate is 63 per 1000, which is 15 per 1000 less than that for 1933. As has frequently been indicated, considerable variations are inevitable when dealing with small figures, and the dramatic drop in the rate must not be regarded as specially important ! The rate for Scotland in 1934 was 78 per 1000.

Deaths of mothers from diseases and accidents of pregnancy and parturition numbered 8, which is equivalent to a rate of 8 per 1000 births against 4·3 per 1000 in the previous year. The 1934 rate for Scotland was 6·2 per 1000 births.

The death-rate from all forms of tuberculosis was 0·7 per 1000—the same figure as in 1933. It is 0·05 below the figure for Scotland.

A. GENERAL.

In view of the large amount of routine work which has to be accomplished, the Public Health and Public Assistance Committee appointed three standing sub-committees to deal with (a) special districts and burial grounds, (b) housing, and (c) institutions. This arrangement has materially eased the work of the main committee.

There were several changes in the staff. Mr William Rae, assistant sanitary inspector, who had been a member of the public health department since 1911, died very suddenly on 9th August, to the deep regret of all his colleagues. Mr Crnickshank, local government officer in District 6, was appointed his successor on the headquarters staff.

It had been evident for some time that the amount of engineering work for which the Committee is responsible was attaining such dimensions as to make the appointment of a whole-time engineer desirable in the interests of efficient and economical work. The County Council approved the proposal on 7th March, 1934, and Mr O. Bell, A.M.I.C.E., was appointed. He joined the department on 12th April.

Other staff changes are shewn on the list of Staff at the beginning of this report.

B. GENERAL ENQUIRIES.

No general enquiries were undertaken other than those found necessary in the course of routine work.

C. WATER SUPPLIES.

Special Water Supply Districts.

BANKSHILL.—Beyond routine work, nothing of note was reported during the year.

BLACKSHAW.—As is customary, complaints of local shortage were received and traced to burst pipes and leaks. A number of valves were inspected, cleaned, and repaired. The pump was overhauled.

CRAWICK.—Nothing to note.

DUMFRIES LANDWARD.—Nothing to note.

EAGLESFIELD.—The supply proved adequate throughout the year, although on several occasions the water available was little more than sufficient to meet demands.

ECCLEFECHAN.—A shortage during August was traced to a burst lead pipe on the Hoddon road. As this pipe crosses the roadway, it was replaced by a heavier one. It was discovered about the same time that a householder had made an unauthorised connection to the system for the purpose of working a water motor. This was disconnected, and an undertaking not to repeat the action having been given, the committee did not consider it necessary to institute proceedings.

The yield of the springs was gauged at frequent intervals throughout the year. Although it proved sufficient to meet the present demands of the village, it is obvious that the building of many new houses, and the provision of sanitary fittings in all the existing houses, would put too great a strain on the springs.

GLENCAPLE.—The reservoir was emptied and cleaned out and certain repairs and improvements made at the straining chamber.

KIRKCONNEL.—“New Supply”—A shortage of the raw water reaching the filters in May was found to have been due to scouring having been carried on to such an extent that the main pipe was partly emptied and its siphon action interfered with. Instructions were given to obviate the likelihood of recurrence.

“Old” Supply—Complaint of discoloration of the water at the pit-head baths, consequent on heavy rainfall, were received during January. In July, September, October, and December some degree of discoloration was reported.

LOWER ANNANDALE.—As noted in last year's report, the supply from Torbeckhill had become much depleted towards the end of the year, due in part to the exceptionally dry summer of 1933, and in part to the necessity of lowering the water level in the reservoir to enable various works to be carried out. The reservoir filled rather slowly during the spring of 1934, and complaints of occasional shortage were received from various parts of the area for some time. There are still several places where a constant supply cannot be depended upon, but this appears to be due not to shortage of water but to pipes, originally of sufficient size, being now inadequate on account of an increased consumpt.

MONIAIVE.—There was a threatened shortage in July, and water had to be cut off at night for a short time to conserve the supply.

Regular search for leaks has resulted in a considerable saving of water in this district. The average daily consumpt during the year worked out at about 52 gallons per head per day. This, however, is still too high for a village like Moniaive, and it seems possible that replacement of the distribution piping will have to be faced sooner or later.

NETHERWOOD, KELTON, AND CRAIGS.—This supply held out better during 1934 than during the previous year. Several complaints of local shortage were due to burst pipes. The provision of a better supply for this district has long been regarded as urgent.

PENPONT.—The yield of the spring was very low during July, and water had to be cut off from 9 p.m. till 6 a.m. for some time.

RUTHWELL AND RAFFLES.—Nothing of special note occurred during the year.

ROWANBURN.—Beyond occasional discoloration after rain there was nothing to note.

The results of chemical and bacteriological analyses of samples of water from the special districts will be found on pages 99-101.

A circular from the Department of Health enquiring as to the adequacy of water supplies during the previous year was received and a report prepared. In the course of the latter I said: "Lack of sufficient water supply in certain parts of the County has long been recognised by the Public Health Committee as a serious problem for which, as yet, no solution has been found. The difficulty is entirely financial. A Memorial dealing with this question was recently laid before the Department of Health, and I need not discuss it further here. I should add, however, that the area mentioned in that Memorial is not the only one lacking a sufficient water supply—Beattock and its vicinity are also short of water, and though a Special District was formed in West Canonbie in 1920, no supply for it has yet been provided—again, on account of financial difficulties.

The Department refer, also, to the possibility of waste of water through leakage, or through carelessness on the part of consumers. Both factors are undoubtedly important, and both are difficult to control in rural areas where a considerable length of pipe line often has to be supervised by a single officer with many other duties.

Waste by leakage is probably considerable in Moniaive, where the distributing piping is old and the pressure from the new reservoir is high. Waste through carelessness is frequent where a supply for stock is given by means of troughs fitted with ball-cocks and placed in fields. Those often get out of order and waste large quantities of water before they are reported or discovered."

The passing of the Rural Water Supplies Act, 1934, by which a sum of £137,500 was made available as a contribution to the expense incurred by local authorities in providing or improving water supplies in rural areas, at last brought the possibility of giving a reasonable supply to a large part of the county within the range of practical politics. The committee instructed that enquiry should be made into the possibility of forming a large water supply area in Lower Nithsdale and Mid-Annandale to be served from a reservoir on the Kettleton Burn, that an extension of the Lower Annandale Special Water Supply District, and an improvement of the existing supply, should be considered, and also the expediency of forming new special water supply districts at Beattock and at Canonbie. The investigations on those matters were in process of completion at the end of the year. By that time it had been decided that the proposed special district at Canonbie should be merged in the extension of the Lower Annandale District.

D. & E. DISPOSAL OF SEWAGE AND POLLUTION OF RIVERS.

(1) NITHSDALE.—No instance of serious pollution by coal washings was reported from the upper reaches of the Nith during the year.

Moniaive Sewage Works were again fortunate in that an absence of serious flooding on the Dalwhat Water prevented any undue strain being thrown on the sewers, except on one occasion when the pumps were unable to cope with the inflow for ten days.

The sewage works at Kirkconnel have continued to produce a satisfactory effluent, and the dilution in the river is, generally speaking, sufficient to obviate any cause of complaint. Works for the protection of the sewer where it runs along the river bank were sanctioned.

The works for the Burgh of Sanquhar, which are situated in the county area, presented a somewhat difficult problem in the latter part of the year. A considerable increase in the amount of creamery waste passing into the sewers resulted in a very definite deterioration in the effluent leaving the works, and at one time it seemed likely that serious pollution of the Nith might result. Creamery waste is notoriously a most difficult trade effluent to treat in ordinary sewage works. The difficulty was eventually solved for the time by an alteration in the type of business carried on at the Creamery, but it is possible that it may recur.

The Thornhill works presented no special difficulty during the year. The effluent is generally satisfactory, and the amount of dilution in the river has proved ample to prevent nuisance arising.

Considerable inconvenience is caused, from time to time, by the lack of reliable plans of the sewers and house connections in the village. When any of the old sewers have to be exposed for any reason, such observations as are possible are made, and it is hoped in time to accumulate sufficient information to give a reasonably accurate idea of the conditions.

It is not customary for a sanitary official to regret the disappearance of a cause of river pollution, but the presumed future immunity of the Wanlock from trade effluent, consequent on the cessation of what must be one of the oldest industries in the realm, is hardly a matter for rejoicing.

Apart from the works mentioned above, the non-tidal portion of the Nith is practically free from possible sources of pollution, though there are several hamlets

where the question of sewage disposal will eventually have to be considered.

(2) ANNANDALE.—Lockerbie burgh sewage works again demanded a good deal of attention. It would be inaccurate to say that the effluent produced is yet satisfactory, but there has certainly been a considerable improvement on its previous condition.

Special attention was paid to the discharge from Loehmaben burgh sewage works into the Castle Loch. Complaints had been made to the effect that the effluent was very dirty and that smells were felt in the vicinity of the works. Investigation shewed that while the effluent, especially from one of the filters, was not what it should be, no evidence of pollution could be detected in the loch a few yards from the point of discharge. The effective working of the plant is hampered by lack of proper facilities for sludging, and the smells complained of seem to emanate not from the works themselves but from a quantity of semi-decomposed sludge which had been allowed to accumulate on the edge of the loch.

Moffat Burgh sewage works produced a satisfactory effluent. The risk to the river at this point is not from the effluent but from untreated sewage by-passed in time of flood.

The works at Ecclefechan and Eaglesfield continued to function satisfactorily.

Representations as to the need of a public convenience in Gretna were considered by the committee, and, after considerable discussion as to the most suitable site, the work was authorised. The provision of such conveniences in rural districts has become a matter of some urgency in consequence of the great development of motor transport.

(3) ESKDALE.—Nothing calling for comment arose during the year.

F. HOUSING.

The lack of adequate water supply in the areas where the majority of new houses contemplated by the Council's

housing scheme are to be built has delayed the work of re-housing.

The two main housing schemes initiated during the year were those at Crawick and at Ecclefechan.

The majority of the houses at Crawick have long been regarded as falling much below modern sanitary standards. The village is without sewers, and in view of its position the provision of a modern sewage treatment plant would be a difficult and costly business. As the great majority of the houses belonged to two proprietors, both of whom had expressed their willingness to have demolition orders made, the committee decided to take action under Section 16 of the Housing (Scotland) Act, 1930. Intimation of intention to make demolition orders was sent to the owners of 66 dwelling-houses. Plans and proposals to make 6 of those suitable for human habitation were laid before the committee, and the matter was in process of adjustment at the end of the year. The present inhabitants of Crawick will be accommodated in new houses to be erected at Kelloholm.

Many of the houses at Ecclefechan are of a poor type and unfitted for repair. A clearance area was mapped out in the angle between High Street and Hall Road, comprising nineteen dwelling-houses unfit for human habitation and sundry other buildings. A recommendation that the County Council should make a clearance order in regard to this area was approved by the Public Health Committee on 19th December.

In addition, demolition orders were made on 10 houses in Ecclefechan which were not conveniently situated for inclusion in the clearance area. A suitable site for building houses for persons to be displaced was obtained in the immediate vicinity of the village.

The case of Wanlockhead, referred to on page 32 of the Annual Report for 1933, is a very difficult one. It now appears certain that the mine is finally closed, and, in the absence of any other form of employment within

reasonable distance, the *raison d'être* of the village seems to have disappeared. Many of the houses are in need of renovation, but under existing conditions it seems impossible to undertake this.

A contravention of the building bye-laws was reported from the Thornhill district, where a building, not previously used for human habitation, had been converted into a dwelling-house without intimation being given to the local authority. After one of the newly-made bedrooms had been reconstructed to increase its floor area, the committee decided to approve the work.

The following plans were submitted :—

New houses to be erected by the County Council	24
New houses to be erected by private enterprise	12
Plans and proposals for alterations on existing houses (including those under Housing (Rural Workers) Acts)	94
Other plans	43

Houses were completed as follows :—

Erected by County Council	20
Erected by private enterprise	6

Two hundred and fifty houses were inspected during the year. Of those, 138 were considered unfit for human habitation. 61 representations were made recommending Demolition Orders, and 33 notices under Section 14 of the Housing (Scotland) Act, 1930.

Two notices were sent under Section 40 of the Housing, Town Planning, etc., Act of 1919, and 6 under Section 20 (1) of the Housing (Scotland) Act, 1925.

G. HOUSING (RURAL WORKERS) ACTS.

Thirty-seven applications in respect of 47 houses were received, this being an increase of one on the previous year.

The working of the Acts was discussed by the committee on 9th March and 12th June. It was reported that the number of houses renovated in Dumfriesshire was disappointing in comparison with most other rural counties, and the possible causes of this were investigated. There seemed reason to suppose that unwillingness of proprietors to take advantage of the facilities provided by the Acts might be due, in part, to the high standard required by the approved scheme, and the committee, while realising the undesirability of lowering that standard to any appreciable extent, determined to consider whether it should be relaxed in any particulars.

It was finally decided that the requirements in respect of the height of ceilings and the lighting area in existing rooms should be modified, and that the procedure in dealing with applications should be simplified as far as possible.

The majority of proposals submitted entail the provision of a bath, but this is not always the case. The question whether a bath should be required in all houses dealt with under the Acts has been raised in committee on several occasions. There is at present no statutory power to require provision of a bath, and it is possible that insistence on this point might result in schemes which are otherwise satisfactory being dropped. Attention is directed, when examining plans, to the practicability of introducing baths at a later date, as it seems likely that their provision in all houses may eventually be required by statute.

Whether in consequence of the modification of the scheme or for some other reason, the number of houses dealt with is increasing, and it is anticipated that the figures for 1935 will show a material advance on former years.

H. TOWN PLANNING.

There was no discussion on this during the year.

I. INFECTIOUS DISEASES.

Six hundred and seventy-four notifications were received from the County Landward and Small Burghs. This is an increase of 238 on the figure for 1933. The greater part of the increase was due to the prevalence of Scarlatina, though Diphtheria also shewed an increase on the low figures which have been recorded in recent years. There was, on the other hand, a considerable reduction in the cases of Influenzal Pneumonia, as Influenza did not attain epidemic proportions during the year.

The total cases notified, and the age-periods in which they occurred, were as follows :—

	Dumfries	Thornhill.	Sanquhar.	Annan.	Girdha.	Lockerbie.	Moffat.	Laugholm.	Total.
Scarlatina	47	71	61	40	27	30	1	99	376
Diphtheria	10	4	30	4	2	15	...	14	79
Erysipelas	8	1	4	5	...	3	1	4	26
Puerperal Fever	1	...	...	...	1	...	...	...	2
Ophthalmia Neonatorum	6	...	...	1	4	...	2	...	13
Acute Pneumonia	17	...	8	7	7	1	1	2	43
Influenzal Pneumonia	2	...	...	...	2	...	...	2	6
Pulmonary Tuberculosis	19	9	14	12	12	5	...	1	72
Non-Pulmonary Tuberculosis	11	3	15	6	7	3	1	1	47
Cerebro Spinal Fever ... ..	...	...	1	...	...	...	...	...	1
Malaria ... ..	...	...	...	...	...	...	1	...	1
Acute Infective Jaundice ... ..	...	...	...	1	...	...	...	...	1
Puerperal Pyrexia ... ..	...	1	1	1	2	1	1	...	7
Total	121	89	134	77	64	58	8	123	674

Age-Periods.

	Under 1	1-5	5-15	15-25	25-45	45-65	65+	Tot.	Hosp.	Not Hosp.
Scarlatina ...	2	81	236	31	23	3	...	376	3 5	11
Diphtheria ...	1	14	35	15	10	4	...	79	5	4
Erysipelas...	...	...	...	1	9	11	5	26	5	21
Puerperal Fever ...	...	...	...	...	2	...	...	2	1	1
Ophthalmia										
Neonatorum ...	13	...	...	...	...	...	...	13	...	13
Acute Pneumonia	3	7	9	4	8	4	8	43	...	43
Influenzal										
Pneumonia ...	...	...	1	1	3	...	1	6	...	6
Pulmonary										
Tuberculosis ...	...	...	18	17	22	13	2	72	26	46
Non-Pulmonary										
Tuberculosis ...	1	7	19	13	6	...	1	47	21	26
Cerebro-Spinal										
Fever ...	...	1	...	...	...	...	...	1	...	1
Malaria ...	...	...	...	...	1	...	...	1	...	1
Acute Infective										
Jaundice ...	...	...	1	...	...	...	...	1	...	1
Puerperal Pyrexia	...	...	...	3	4	...	...	7	...	7
Total ...	20	110	319	85	88	35	17	674	493	181

Enteric Fever.—No cases of Enteric were notified in Dumfriesshire. The incidence of this disease over the whole of Scotland was, in 1934, the lowest ever recorded.

The need for legislation to deal with typhoid carriers was emphasised by me while giving evidence before the Departmental Committee on Health Services.

Scarlatina.—Three hundred and seventy-six cases of Scarlatina were notified during the year, this being the largest number recorded since 1915.

In the Annual Report for 1933 I pointed out that Scarlatina had prevailed, to an abnormal degree, in many parts of Scotland and that an increased frequency in Dumfriesshire might have been expected. That increase did not occur during 1933, but was evident in 1934.

Its incidence was by no means regular. Upper Nithsdale had a number of cases, Durisdeer and Wanlockhead in particular suffering heavily. The disease was pre-

valent in Annan and Gretna districts, Dumfries Landward, and to a smaller extent in the remainder of the Dumfries District. Eskdalemuir, Langholm Landward, and Canonbie had an unusually high incidence. On the other hand, Lockerbie District had comparatively few cases, and Moffat District was practically unscathed. Amongst the Small Burghs, Sanquhar, Lockerbie, and Annan suffered more than usual; Lochmaben and Moffat had only 4 and 1 cases respectively; but Scarlatina was epidemic in Langholm during the second half of the year.

It is impossible to ascribe this prevalence of Scarlatina during 1934 to any single cause. Epidemics are the result of many combining factors, generally obscure, and varying in importance from time to time. They may be capable of control by administrative action, or may be of such a nature that they can be affected only indirectly.

Broadly speaking, the factors which determine the incidence of Scarlatina, and other infectious diseases, may be grouped in three classes:—

- (1) Those which affect "herd-immunity"—that is, the resistance of the community to infection.
- (2) Those which affect the frequency, infectivity, and virulence of the causative micro-organism.
- (3) Those which affect the channels by which infection is conveyed from one person to another.

Herd-immunity is a very complex subject, but appears to depend largely on the proportion of persons in the community who are susceptible to infection. If Scarlatina has been prevalent in recent years, a considerable number of individuals become immune, either by suffering from an actual attack of the disease or by receiving a "dose" of infection sufficient to produce immunity without giving rise to recognisable symptoms. If, on the other hand, Scarlatina has been absent for a considerable period, the number of non-protected persons increases, until they are present in sufficient number to afford material for an epidemic, if infection should be introduced. But in rural areas the degree of herd-immunity may reach a very

low point without an epidemic occurring, as the community is sufficiently protected by the fact that its members are comparatively isolated from each other.

The average number of cases of Scarlatina notified yearly in the County and Small Burghs during the last ten years was 187. The numbers during 1932 and 1933 (143 and 144 respectively) were below the average, but it seems unlikely that this comparatively small deficit could have reduced immunity throughout the County to any appreciable extent. Reference to the map, however, will show that a large proportion of the cases notified during 1934 came from rather isolated areas—Wanlockhead, Durisdeer, Closeburn, Langholm Landward, and Eskdalemuir—where Scarlatina has been infrequent in recent years and where the herd-immunity was presumably low.

So far as Langholm Burgh is concerned, there was an epidemic of Scarlatina there in 1916. Except for a minor prevalence during 1928 and 1929, the Burgh had been almost unaffected by Scarlatina since then, the average annual number of cases being under two. There seems reason for supposing, therefore, that the large amount of Scarlatina in the County during 1934 was partly due to the fact that the population in several districts specially affected had a low degree of immunity to the disease.

Whether the type of Scarlatina was more than usually infective is a difficult question to answer. It is significant, however, that no less than 14·9 per cent. of the notifications were “return” cases—that is, cases from houses to which a patient had returned from hospital after the usual period of detention and apparently free from infection. That so large a proportion proved, by infecting others, that they themselves were still in an infectious state, probably indicates that the disease was of an unusually infective type. In ordinary years the percentage of return cases in the County is very small—frequently *nil*.

There is no evidence that any special channel of infection was of importance, and it is obvious from the geographical distribution of the cases that no single factor

of the sort could have been causative. The only food-stuff which is important in spreading *Scarlatina* is milk. There is no reason to suppose that any of the cases during 1934 were infected in this way.

Generally speaking, infectious diseases are most liable to spread where there is overcrowding. This has been noted in regard to *Scarlatina* in some places, but it is by no means always the case, and in certain cities the attack rate is lower in the more overcrowded districts. It is possible that in such instances the effect of overcrowding may be masked by other factors. The figures for Dumfriesshire are, of course, too small to justify any opinion being based on them; but, so far as they go, they afford little support to the suggestion that *Scarlatina* was more common in overcrowded houses.

The incidence on females was considerably heavier than on males, the figures being 213 and 163 respectively.

The seasonal incidence of the disease corresponded to that generally observed, in so far that the maximum occurred in October and November.

Chart 1 shows the weekly incidence of *Scarlatina* in the County and Small Burghs.

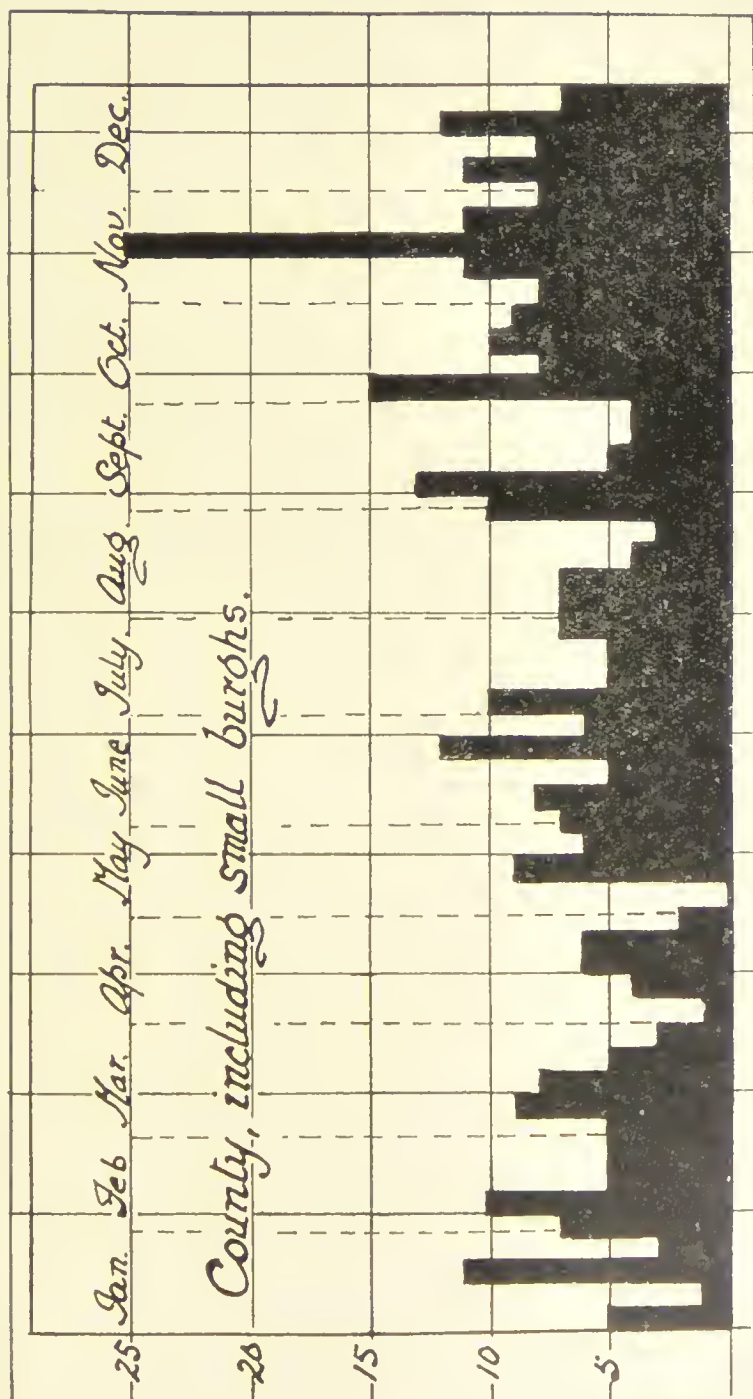
Of the 376 cases notified, 365 were removed to hospital.

The statistics of notified cases of *Scarlatina* in the County and Small Burghs during the last five years are as follows :—

			1930.	1931.	1932.	1933.	1934.
Cases	.....	.....	200	260	143	144	376
Deaths	.....	.....	1	1		1	4
Morbidity per 1000	.....		3.5	4.4	2.4	2.4	6.5
Mortality per 1000	.....		0.02	0.02	..	0.018	0.07
Case-fatality per 1000	.....		5	3.8		6.9	10.6

Diphtheria.—Seventy-nine cases were notified, as compared with thirty-one in 1933. The chief incidence was in Sanquhar District, where there were thirty cases, most of those occurring in Kirkeconnel during the first half of the year. The spread of infection appears to

CHART 1.



have been by personal contact. Lockerbie District had a somewhat higher incidence than usual, nine notifications being received from the landward area and six from the Burgh. Langholm District had a total of fourteen cases, five occurring in the Burgh. There was a group of seven cases from Eskdalemuir, infection having apparently been acquired from a Scarlatinal case who was a carrier of diphtheria bacilli. Gretna District had only two cases, Thornhill four, and Moffat none. The three last-named districts have been remarkably free from Diphtheria in recent years, the average morbidity per 1000 from 1930 to 1934 inclusive being—Thornhill 0·44, Gretna 0·49, and Moffat 0·56, against 0·97 for the whole county. Generally speaking, the incidence of Diphtheria in Dumfriesshire has fallen, during the last twenty years, more steadily than that of Scarlatina. Taking the morbidity of each disease during the quinquennium 1915-1919 as 100, the figures during the succeeding quinquennia have been—for Scarlatina 58, 58, and 88, and for Diphtheria 85, 66, and 45.

The clinical and bacteriological condition of the notified cases was as follows :—

	Bacteriologically Positive	Negative	Unknown	Total.
Clinical Diphtheria ...	33	19	1	53
Not clinical Diphtheria	9	15	2	26
	—	—	—	—
	42	34	3	79
	—	—	—	—

Of the nine cases which were bacteriologically positive, but were not clinically Diphtheria, some may have been carriers who suffered from non-Diphtheritic sore throat, but several were probably mild cases of true Diphtheria who were not notified or admitted to hospital until the clinical signs had disappeared. Of the nine, one was admitted on the third day of the disease, three on the fourth, one on the eighth, the ninth, and the fourteenth, while in two the history was indefinite.

Fifteen cases, it will be noted, were bacteriologically negative, and did not present clinical signs of Diphtheria while in hospital. It is inevitable that such cases should occur, as a doctor, seeing a doubtful case in bad housing conditions or in a remote situation, naturally gives the patient the benefit of the doubt, and deals with it as Diphtheria, and it is certainly better on the whole that some non-Diphtheritic cases should be notified than that what may prove to be true Diphtheria should be overlooked.

Five cases ended fatally. Of those, however, one was a man of 75, an inmate of the Crichton Royal Institution, who suffered from other pathological conditions, two cases were complicated by Broncho-Pneumonia, and one by Measles.

The statistics of Diphtheria in the County and Small Burghs during the last five years have been :—

				1930.	1931.	1932.	1933.	1934.
Cases	.....	.....	.....	47	82	43	31	79
Deaths	.....	.....	.....	5	2	4	2	5
Morbidity per 1000	.....			0·8	1·4	0·7	0·6	1·3
Mortality per 1000	.....			0·08	0·03	0·07	0·03	0·08
Case-fatality per 1000	....			106	24·	93·	64·	63·

The other notifiable diseases require little comment. There were 43 notifications of Acute Pneumonia against 31 in 1933. On the other hand, the notifications of Influenzal Pneumonia fell from 57 to 6.

One case of Cerebro-Spinal Fever—a child aged 2—was notified from Sanquhar Burgh. The diagnosis was confirmed bacteriologically. The case ended fatally.

The report on Tuberculosis during 1934 will be found on page 24

K. SCHOOL CLOSURE.

It was not found necessary to close any school on account of infectious disease during the year.

L. LIST OF HOSPITALS.

M. BRIEF REVIEW OF THE HOSPITAL POSITION IN THE AREA.

No material change has taken place in the position since last year.

Langholm Isolation Hospital, which had been closed in 1932, had to be re-opened in October, as the prevalence of Scarlatina in other parts of the County seemed likely to over-tax the accommodation at Lochmaben and Annan, to which patients from Langholm District had been removed. This, of course, involved the appointment of a temporary staff—always a somewhat expensive matter. The hospital was still open at the end of the year.

The following table shows the work done in the four isolation hospitals during the year.

	Lochmaben.	Annan.	Thornhill.	Eskdale.	Total
Total admissions	149	145	128	34	456
Total discharges	159	138	144	19	460
Total deaths	4	3	1	1	9
Average detention	45·8	34·4	35·4	41·9	
Average beds occupied	20	20	22	15	.....
Highest number	33	25	27	22	.....
Lowest number	6	5	10	.....	.....
Surgical operations under general anæsthesia	1	.....	2	.....	3
Scarlatina	85	129	122	34	370
Diphtheria	60	13	3	.....	76
Erysipelas	3	1	3	.....	7
Other conditions	1	2	.....	.....	3
Total	149	145	128	34	456

N. AMBULANCE SERVICE.

No change in this took place during the year.

O. OUT-PATIENTS' DEPARTMENT.

A report on treatment at Kirkbank Clinic is given below.

P. MEDICAL CARE AND NURSING OF THE SICK POOR.

No material change has been made on the arrangements formerly reported.

Q. VENEREAL DISEASES.

Dr Robertson reports that during the year ending 31st December, 1934, 102 new cases attended the Clinic at Kirkbank.

Of these 26 were Syphilis (18 male, 8 female).

61 were Gonorrhœa (53 male, 8 female).

14 were Non-specific Venereal (7 male, 7 female).

1 was Non-venereal (female).

Four of the Syphilic cases were congenital.

Sixty-three former cases continued treatment.

Attendances, exclusive of those for irrigation, totalled 1420.

Six hundred and fifty-six intravenous and intramuscular injections were given during the year.

Laboratory tests carried out for patients comprised 106 Wassermann tests and 250 examinations for Gonococci.

Attendance has been good on the whole. An inducement to this is the enlisting of the co-operation of the patient in his or her own cure. What may be termed the mental aspect of the case demands in many instances as much attention as the physical manifestations—the former not infrequently being a source of more distress to the

patient than the latter, and it is found that discussion and explanation has a markedly beneficial effect on the general condition.

Treatment of Syphilis remains on former lines, arsenic, bismuth, mercury, and iodine being the drugs employed. As regards Gonorrhœa, the establishment of thorough drainage, supplemented by vaccines, is the chief line of treatment. Gonacrine tablets have been found useful where regular irrigation is not always practicable.

R. TUBERCULOSIS.

The total number of notifications of Tuberculosis from the County and Small Burghs was 119.

The statistics of notification from 1914 onward are given in the following table :—

Year.	Total Notifications.	Pulmonary.	Non-Pulmonary.	Rate per 1000.
1914	..... 131	83·2%	16·8%	2·4
1915	..... 134	66·4%	33·6%	2·5
1916	.... 198	71·7%	28·3%	3·4
1917	..... 171	68·4%	31·6%	2·6
1918	..... 157	74·5%	25·5%	2·4
1919	..... 139	68·3%	31·7%	2·3
1920	..... 127	74·0%	26·0%	2·2
1921	..... 138	70·0%	30·0%	2·3
1922	..... 118	68·6%	31·4%	2·0
1923	..... 134	63·4%	36·6%	2·3
1924	..... 151	58·9%	41·1%	2·5
1925	..... 156	70·0%	30·0%	2·6
1926	..... 140	50·0%	50·0%	2·3
1927	... 138	60·1%	39·9%	2·3
1928	..... 146	66·4%	33·6%	2·4
1929	..... 148	54·7%	45·3%	2·5
1930	..... 134	56·0%	44·0%	2·3
1931	..... 121	53·7%	46·3%	2·0
1932	..... 123	53·7%	46·3%	2·1
1933	..... 118	55·9%	44·1%	2·1
1934	..... 119	60·0%	40·0%	2·2

The death-rate from all forms of Tuberculosis was 0·7 per 1000—the same as in the previous year. The Pulmonary and Non-pulmonary rates were 0·49 and 0·21 respectively.

The fall in the death-rate from Tuberculosis since 1891 is shewn in the following table :—

	Pulmonary.	Non-Pulmonary.	Total.
1891-1910 (mean)	1·647	0·692	2·339
1911-1920 (mean)	1·028	0·353	1·381
1921	0·839	0·117	0·956
1922	0·859	0·214	1·073
1923	0·910	0·240	1·150
1924	0·699	0·290	0·989
1925	0·921	0·301	1·222
1926	0·693	0·270	0·963
1927	0·722	0·387	1·109
1928	0·828	0·236	1·064
1929	0·510	0·209	0·719
1930	0·543	0·156	0·699
1931	0·45	0·34	0·79
1932	0·62	0·12	0·74
1933	0·42	0·28	0·70
1934	0·49	0·21	0·70

Dr Robertson reports as follows :—

During the year ending 31st December, 1934, 119 notifications were made to this department. Of these 72 were Pulmonary (35 male, 37 female) and 47 Non-pulmonary (17 male, 30 female).

The Non-pulmonary cases comprised :—

Superficial Glands	20
Abdomen	15
Bones and Joints	5
Spine	4
Other Parts and Organs	3
<hr/>	
Total	47
<hr/>	

Incidence in the various County Districts was as follows :—

District	Pulmonary.		Non-pulmonary.		Total.
	M.	F.	M.	F.	
Dumfries	9	10	4	7	30
Thornhill	4	5	.....	3	12
Sanquhar	5	9	5	10	29
Annan	6	6	2	4	18
Gretna	8	4	3	4	19
Lockerbie	2	3	2	1	8
Moffat .....	.....	.....	.....	1	1
Langholm	1	.....	1	..	2
Total	35	37	17	30	119

Age-periods were as under :—

Pulmonary.	Under								Total.
	1.	1-4.	5-14.	15-24.	25-34.	35-44.	45-64.	65 and over.	
Males .....	.....	.....	10	7	5	4	9	.....	35
Females .....	.....	.....	8	10	9	5	4	1	37
Non-pulmonary.									
Males .....	.....	.....	4	6	3	2	1	.....	17
Females	1	3	13	10	1	2	.....	..	30
Total	1	7	37	30	17	12	13	2	119

Quarterly Incidence.

	Pulmonary.	Non-pulmonary.	Total.
1st Quarter	12	10	22
2nd Quarter	28	12	40
3rd Quarter	17	16	33
4th Quarter	15	9	24
Total ...	72	47	119

Occupational Incidence.

Under School Age	8
School Age	37
Domestic Duties	31
Farm Work	8
Labourer	5
Miner	3
Clerk	3
Dressmaker, Tailor, Soldier, Grocer, Woodman, Typist, Boiler-maker, Railway Worker, Mason (each)	1

Disposal of Cases.

Admitted to Sanatorium or Hospital	48
Previously treated in Sanatorium or Hospital	9
Inmates of C.R.I.	8
Left County	4
Died	23

Shelters were used by 24 patients, and 77 were in receipt of medical comforts.

S. MATERNITY AND CHILD WELFARE AND SCHOOL HEALTH SCHEMES.

(a) Maternity and Child Welfare.

(1) MIDWIVES (SCOTLAND), 1915, AND MIDWIVES AND MATERNITY HOMES (SCOTLAND) ACT, 1927.

Notice of intention to practise within the County and Small Burghs was given, as required by Section 18 of the principal Act, by twelve midwives.

The following is extracted from the return for 1934 made to the Department of Health for Scotland :

	Total in Area.	In Midwives' Practice.
Births	988	75
Deaths within 10 days of birth	25	2
Cases of Ophthalmia Neonatorum	13	...
Cases of Puerperal Sepsis	2	1
Deaths from Puerperal Sepsis	2	...
Cases of Puerperal Pyrexia	7	...
Deaths from Puerperal Pyrexia .....	...	...
Still-births	40	1

Medical aid was summoned by midwives in 10 cases under Section 22 of the Midwives (Scotland) Act, 1915.

The classes of emergency were :—

Difficult Presentations	3
Difficult Presentations and Uterine Inertia	1
Primary Uterine Inertia	1
Delayed Labour, 2nd Stage	2
Prolonged Labour ..	1
Still-birth, Macerated	1
Retained Placenta	1

Three expectant mothers were admitted to Glasgow Maternity Hospital.

Four children under 5 who were in need of orthopædic treatment were sent to Fairmilehead Hospital.

Thirty-four visits to District Nurses and 8 domiciliary visits to Midwives were made by the Health Visitors.

Maternity Homes.—There are no registered Maternity Homes in the County. Moffat Cottage Hospital, which has a maternity block, is exempted from registration under Section 15 (1) (a) of the 1927 Act.

(2) NOTIFICATION OF BIRTHS ACTS, 1907-1915.

The total number of births notified in the County and Small Burghs was 988. This includes 40 still-births, which are notifiable, though not registrable.

In addition, 123 transfers regarding infants under 1 year, and 85 transfers regarding children aged 1 to 5 years, were received from other authorities.

Visitation and Supervision.—The total number of domiciliary visits paid by Health Visitors and District Nurses under the Maternity and Child Welfare Scheme was 31,254. The table below shews the distribution of the work :—

STATUTORY DUTIES OF NURSES AND HEALTH VISITORS.
Visits during 1934.

Quarter	Tuberculosis.	Maternity.				Infants (Under one year).	Children (1·5 years).	School Children.	Total
		Ante-Natal.		Post-Natal.					
		First Visits.	Re-visits.	First Visits.	Re-visits.				
1	452	144	293	138	1,993	3,177	3,158	1,694	11,054
2	543	100	283	106	1,904	3,039	2,941	1,490	10,411
3	364	87	223	89	1,361	2,515	2,559	736	7,934
4	454	107	172	90	1,341	2,680	2,744	1,482	9,070
Totals	1,813	438	981	423	6,599	11,411	11,402	5,402	38,469

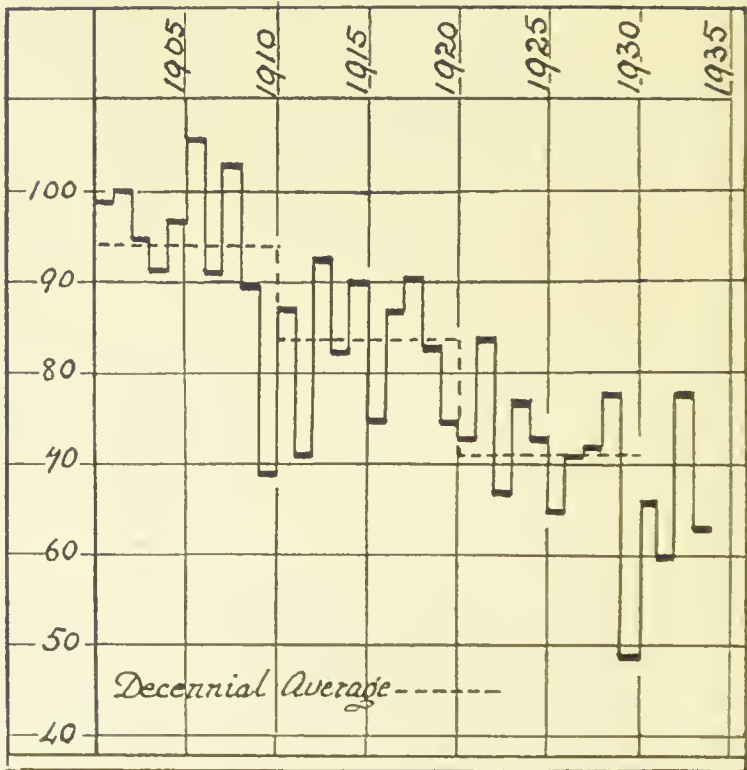
31,254

Maternal Mortality.—Two deaths from Puerperal Sepsis were registered, and six deaths from other Puerperal Causes. This is equivalent to a maternal mortality-rate of 8 per 1000 births, which is 1·8 per 1000 above the rate for all Scotland.

Infantile Mortality.—The rate during 1934 was 63 per 1000 births—15 per 1000 below that for 1933, and 25 per 1000 below that for the whole country. The chart on page 30 shows the fall of this rate since the beginning of the present century.

An important aspect of the reduction of infantile deaths is the proportion of neo-natal deaths—that is, those occurring during the first month of life—to those during the remainder of the year. The chart on page 32 shows the total infantile deaths—not the rate—occurring in the County and Small Burghs since 1911. The black columns

CHART 2.



*Infantile Mortality: Deaths per 1000 births.
County & Small Burghs.*

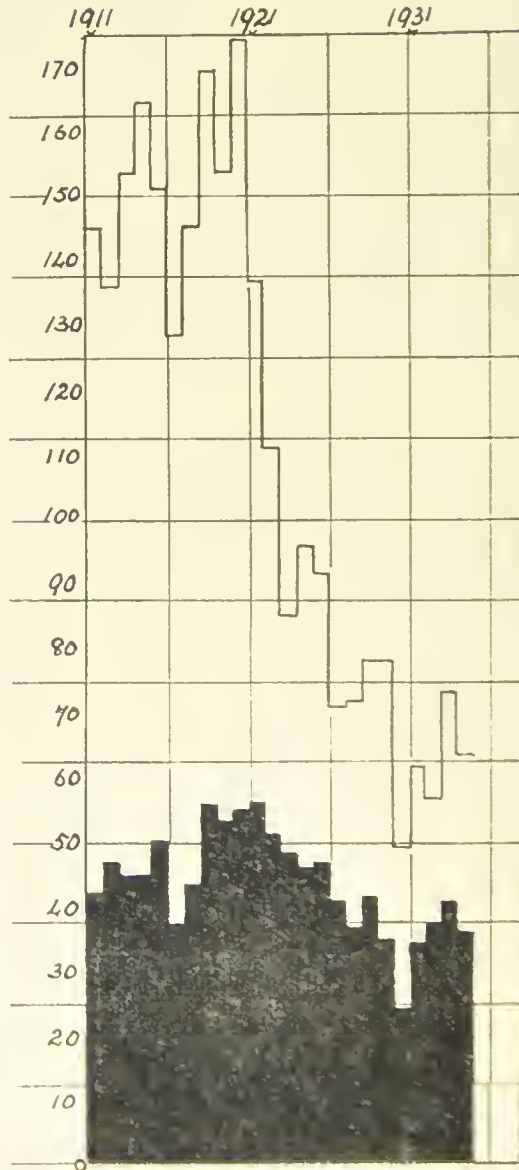
show the neo-natal deaths. It will be observed that the fall in the number of infantile deaths has been much more evident during the ages 1-12 months than during the neo-natal period. Roughly speaking, the neo-natal deaths comprise the majority of those due to pre-natal and natal causes, while those in the remainder of the first year of life are affected by environmental factors.

The proportion of infantile deaths due to infectious diseases is small. Of 304 such deaths during the last five years, only 26 were due to notifiable infectious diseases. Of those, 13 were due to Whooping-cough and 7 to Tuberculosis.

Nursing Associations.—There were at the beginning of 1934 eighteen local nursing associations, employing twenty-three nurses, in the county landward. The localities served by those associations, and the number of nurses in each, are shewn in the following table:—

Name.	Area.	No. of Nurses.
Glencairn ...	Glencairn Parish	1
Thornhill ...	Morton, Closeburn, Durisdeer	1
Ruthwell ...	Ruthwell Parish	1
Dalton and Mouswald.	Dalton and Mouswald and parts of Dryfesdale and Lochmaben... ..	1
Annan	Annan Burgh and Parish and Cummertrees	2
Sanquhar ...	Sanquhar Parish	1
Kirkconnel ...	Kirkconnel Parish	1
Dunscore ...	Dunscore and Holywood Parishes ...	1
Lockerbie and District.	Dryfesdale (including Lockerbie Burgh), St. Mungo, Tundergarth, Hutton and Corrie and Applegarth	2
Lochmaben ...	Lochmaben Parish and Burgh of Lochmaben	1
Kirkmichael and Garrel.	Kirkmichael	1
Lower Annandale	Dornock, Gretna, Kirkpatrick-Fleming, Half-Morton	3
Canonbie ...	Canonbie Parish	1
Penpont ...	Penpont, Keir, and Tynron	1
Moffat ...	Moffat and Kirkpatrick-Juxta	1
Kirkmahoe ...	Kirkmahoe Parish	1
Eskdalemuir, Ewes, Westerkirk, Langholm.	Eskdalemuir, Ewes, Westerkirk, Langholm Burgh, and Parish	2
Tinwald, Torthorwald, and Locharbriggs.	Tinwald, Torthorwald, and Village of Locharbriggs	1

CHART 3.



*Infantile Mortality.
County & Small Burghs.*

*White Columns = Total deaths
under 1 year.*

*Black Columns = Deaths under
1 month.*

It will be seen that there are still some parts of the County for which there is no provision. Those are the parishes of Middlebie, Johnstone, Wamphray, Hoddum, and Caerlaverock, and the village of Wanlockhead. Attempts to form associations in those districts have been made frequently, but have been so far unsuccessful.

The present nursing service has been evolved during a considerable number of years, and the areas served by the existing associations have been determined largely by the degree of local enthusiasm which could be aroused and the amount of financial support which could be guaranteed. Admirably suited as the nursing associations undoubtedly were for providing service in their own districts, they do not constitute, in combination, an ideal service for the County. In addition to the areas still without a district nurse there are, it must be admitted, several existing associations whose areas are too small to keep a nurse fully occupied and whose resources are too restricted to pay an adequate salary. Were it possible to approach the whole question *ab initio*, it would, I suggest, be practicable to arrange the nursing districts so as to provide a service for the whole County with little or no increase of personnel. In this, as in every other aspect of rural administration, the development of motor transport has put an entirely new complexion on the problem. The old boundaries of nursing associations, which were generally those of parishes or, sometimes, of estates, have ceased to have much significance, and it will be necessary to consider, at no distant date, whether the health authority's rapidly increasing responsibilities in regard to domiciliary medical treatment can be properly met without some reconsideration of the existing facilities.

Two changes occurred during the year. The Dumfries Landward, Tinwald, and Torthorwald Nursing Association ceased to exist—a matter of regret, in view of the excellent work it had accomplished in an area by no means easy to work—and the Eskdalemuir, Ewes, Westerkirk, and Langholm Association extended its activities to include

the Burgh of Langholm. This is a very satisfactory development.

T. MILK & DAIRIES (SCOTLAND) ACT, 1914, AND ASSOCIATED ORDERS.

Mr Sangster reports as follows :—

The departure, in Mareh, of Mr F. A. Davidson as Chief Veterinary Officer for Staffordshire, and the subsequent delay before Mr Steele could take up his duties here, caused a rather serious upset of the work of the department at a critical time and made impossible the completion of the contemplated programme despite extended hours and Sunday working. Only the absolutely necessary duties under the Diseases of Animals Acts and Orders were overtaken.

MATTERS OF OUTSTANDING GENERAL INTEREST AND IMPORTANCE.

Effect of the Milk Marketing Scheme.—In last year's report I drew attention to the danger of a falling-off in the standard of milk following the introduction of a uniform price, but fortunately my fears have proved groundless, as producers have continued to pay the same care and attention to the matter as formerly. This is greatly to the credit of many old producers who have suffered financially by the loss of lucrative independent contracts. In the more remote districts the scheme has proved of undoubted benefit and, on the whole, even with the relatively low nett price received, milk production has proved more remunerative than most branches of farming, without leaving a large margin of profit. This, along with the fact that a guaranteed market, not previously available, existed for the product, has led many to forsake their normal methods of farming to join the ranks of the dairymen. This County has not been involved to any great extent in this "Klondyke-like" rush, as the number of dairy farms has steadily increased during the past eight years.

From the sanitary viewpoint, major and minor improvements in premises and equipment have been undertaken.

Desire for a "Higher Standard" Milk.—To a great many people good milk means a creamy liquid, and there would appear to be some demand for a raising of the butter fat standard. There is no reason to doubt that the general position with regard to this has been improved in recent years despite increased yields, but modern methods of marketing tend to interfere with the cream line, thus causing misgivings in the minds of consumers. Could they be taught the significance of clean, safe milk, and the efforts made to supply it, a definite advance could be recorded. The continued poor demand for designated milks, even amongst those who can well afford it, seems to indicate that the demand for a higher standard milk is rather half-hearted. It would be advisable to have a definite official standard of cleanliness for non-graded milk and thus prevent controversy and difference of opinion amongst producers, distributors, and officials. It is questionable if the raising of the standard for butter fat content would do any good, unless the same standard was to be adopted under the Food and Drugs Acts, as there would be no guarantee that this milk with a high fat content would reach the consumer unadulterated.

On the whole the general improvements which have been taking place during the last seven years continue to be well maintained.

No administrative difficulties have been encountered.

PREMISES—see Table I.

As explained in previous reports, the premises in this County are classified according to the requirements of the local bye-laws. As the result of carefully superintended improvements, 38 additional farms have been placed in Class I. ; and of this number 31 were raised from a lower class and the remaining 7 were premises registered for the first time. Premises in Class I. comply with the County bye-laws in every respect.

On many other premises minor recommended improvements have been carried out. Class III. premises, typically small farms where butter is sold or a little milk sold to neighbours, show a decrease, probably on account of the small demand for home butter and also to the desire to make registration with the Milk Marketing Board unnecessary.

INSPECTION OF CATTLE AND PREMISES.

The requirements of the Act were fulfilled in respect of the annual examination of cattle and inspection of premises, methods, etc., on registered dairies, and in addition a large number were visited twice and others more often as occasion demanded. As compared with last year, 8 more routine visits were paid to registered premises and 58 more visits for the purpose of advising on the construction, reconstruction, and improvement of premises. The practice of notifying a number of farmers of intended visits was continued and found to be satisfactory, as the animals were at hand and available for inspection when in ordinary circumstances they would have been in the fields. On unregistered and Class III. premises the cows were examined as opportunity afforded. As stated in previous reports, I feel that more time could be profitably spent on these premises, as careful supervision would doubtless raise the standard of health in the herds and ultimately prove highly beneficial to the dairy industry in general, as well as giving a measure of protection to the families supplied therefrom.

CONDITIONS AND CLEANLINESS OF CATTLE.

The continued supervised improvements in registered premises has again resulted in an appreciable raising of the general standard of cleanliness in cows; their condition also has been well maintained.

Nature of fodder and diet as affecting quality of milk.
—The seasons were good and fodder was secured in splendid condition, and this, along with the well-balanced rations now fed to the greater number of dairy herds in

Dumfriesshire, ensures that the quality of the milk produced is of a uniformly high standard.

DISEASES FOUND ON CLINICAL EXAMINATION.

Table III. gives particulars of diseases met with during the year. The diseases found and the number of animals affected are much as in the previous year.

When it was considered essential, affected cows were isolated, the milk from diseased animals either boiled and fed to calves and pigs or mixed with disinfectant and disposed of.

Mastitis.—The prevalence of this disease in dairy herds emphasises the need for more routine clinical examinations, also repeated visits and bacteriological examinations of milk to ensure that the produce of such affected animals does not reach the ordinary milk supply until the animals have fully recovered. The value would be enhanced if such visits were carried out during the milking periods, when methods could be scrutinised.

Contagious Abortion.—The number in Table III. refers to herds which, when enquired into, had a history leading one to suspect the presence of contagious abortion. No case of undulant fever in man was reported during the year as being due to infection by milk from this County.

The vast amount of routine work to be undertaken makes impossible any organised investigation into extraneous matters.

BOVINE TUBERCULOSIS.

Further steps taken to secure a tubercle free milk supply.—During visits to dairy farms every opportunity is taken of explaining the benefits accruing from the clearing up of dairy herds and how this can be best undertaken in any particular set of circumstances. To a certain extent the condition of the herd and the position of the owner requires individual consideration. The advantages of reporting early any animals showing suspicious symptoms are stressed.

Difficulties militating against the successful marketing of Certified or Grade "A" (T.T.) milk.—See under Milk (Special Designations) Order (Scotland), 1930.

Number of cows found tuberculous on clinical examination of the herds.—Table V. is an extract from the Return for 1934 under the Tuberculosis Order, 1925, relating to animals on registered dairy premises. There is a decrease shown in the above table of animals dealt with and slaughtered. One would like to think that the peak has been reached and that fewer tuberculous animals will be found as time goes on. I can, however, definitely state that year by year fewer obviously affected animals are met with. Figures bear this out in the higher percentage of "Not Advanced" compared with the number of "Advanced" cases found on post-mortem examination. This points to the detection of the disease in the early stages before it has become highly dangerous and must be regarded as an encouraging sign.

It is interesting to note in Table IV. the small percentage of positive results from the different tests for 1934 as against the figures for 1929. More samples were examined in 1929 than in any previous year.

Tubercle Bacilli in milk.—That a definite advance has been made and maintained in recent years is conclusively proved by the few reports of tuberculosis positive samples received from authorities to which milk from this County is forwarded. During 1934 only two such reports were received. One case concerned the bulk milk from a local creamery forwarding milk to England, and 73 farms were implicated, 69 of which were in Dumfriesshire. All the animals in the 69 herds were examined clinically as early as possible, and on completion of each examination a bulk sample of milk from each herd was taken for biological test. Not one clinical case was found in any of the herds, and all samples were negative to the biological test. It was discovered that a non-registered producer had been sending milk to this creamery, and in this herd was found a cow which was dealt with

under the Tuberculosis Order and slaughtered. Unfortunately a sample of this cow's milk was not tested for tubercle bacilli. The other reported positive sample was from a herd of 28 cows. This herd was examined, and one cow suffering from Pulmonary Tuberculosis was slaughtered under the Tuberculosis Order. A sample of milk from this cow proved on biological test to be negative. Two bulk samples taken at different times from the remainder of the herd and submitted to the biological test were also negative.

					Samples.	Guinea-pigs Inoculated.
Mixed bulk samples of milk from individual farms for biological test for the presence of Tubercle Bacilli					144	95
Number Positive	...	...	...	...	...	...
Number Negative	...	...	...	...	124	83
Tests not completed	...	...	...	...	20	12

Post-mortem examination of the guinea-pigs showed no evidence of Tubercle Bacilli. The tests not completed refer to cases where the guinea-pigs died from other causes before the lapse of six weeks. The testing of bulk samples is a convenient method of checking the efficiency of the clinical examinations of the herds and would be extended if facilities were available, but the guinea-pig accommodation in the Bacteriologist's department is definitely limited.

Total number of cows found tuberculous after Tuberculin Test.—No Tuberculin Test was carried out under Section 22 of the Act. When it was considered necessary it was done under the Tuberculosis Order of 1925.

Notes of samples taken for examination in terms of Section 21 of the Act.—It was not found necessary to take samples under Section 21 of the Milk and Dairies (Scotland) Act, 1914.

Sections 13 and 14 of the Milk and Dairies (Scotland) Act, 1914, are being reasonably well complied with, although a number of farmers are still slow to report suspected cases. Practically all cases of diseased animals reported on in Table III. of this report were found when doing clinical examination of the herds.

MILK (SPECIAL DESIGNATIONS) ORDER (SCOTLAND), 1930.

TUBERCLE FREE HERDS.

	Average Herd.	Estimated Gallons per Annum.
(i) Certified.		
Wm. A. Thomson, Dalpeddar, Sanquhar ...	31	26,350
(ii) Grade "A" (T.T.).		
D. Kirkpatrick, Auchembainzie, Thornhill ...	60	
A. & A. Kirkpatrick, Barr, Sanquhar ...	90	
R. Graham, Blackford, Lockerbie ...	28	
J. Cochrane, Byrholm, Keir ...	40	
The Directors, C.R.I., Dumfries ...	110	
W. Brown, Drumcork, Thornhill ...	53	
Messrs Halliday, Gillesbicrigg, Boreland ...	40	
J. S. Laidlaw, Glengar, Penpont ...	32	
J. Marshall, The Green, Dumfries ...	28	
Messrs Wyllie, Hannah, Cummertrees ...	59	
M. Sloan, Hunterhouse, Lochmaben ...	26	
Mrs V. T. Dickie, Knockenijig, Sanquhar ...	35	
Messrs Howie, Muirside, Holywood ...	75	
J. Jamieson, Roundbush, Dornock ...	38	
R. Millar, Shawsholm, Closeburn ...	69	
D. Wilson, Auchenhessnane, Penpont (Reg. 20/11/34) ...	35	
A. Caldwell, Auchentaggart, Sanquhar (Reg. 21/12/34) ...	28	
J. Mackie, Dalfibble, Kirkmichael (Reg. 21/12/34) ...	100	
N. M'Millan, Knowe, Kirkeconnel (Reg. 21/12/34) ...	50	
J. Johnstone, Mellentae, Lockerbie (Reg. 24/12/34) ...	40	
Total ...	1036	538,768
(iii) Grade "A."		
A. H. L. Walker, Rogermoor, Moffat ...	18	
Mrs A. S. Paterson, Holms, Beattock ...	28	
Total ...	46	30,665
(iv) Herds known to have passed the Tuberculin Test, not licensed under this Order.		
12 (twelve) herds ...	371	
Grand Total ...	1484	

(v) Premises Licensed for Bottling and Retailing Milk as—

1. Certified.

Messrs Edgar, 78 High Street, Langholm.

2. Grade "A" (T.T.).

Co-operative Society, Sanquhar and Kirkconnel.

T. J. B. Sime, High Street, Annan.

Wm. Thomson, 105 Central Avenue, Gretna.

3. Pasteurised.

Dumfriesshire Dairy Co., Ltd., Well Road, Lockerbie.

Six additional tubercle free herds were licensed under this Order during the last two months of the year. In view of the previous slow progress made under this Order, since it came into operation, this is very satisfactory. The animals in twelve other herds have also passed the Tuberculin Test, while a fairly large number of farmers are working with a view to obtaining a clear herd.

The increase in the number of herds under this Order was due to the announcement that the Government was likely to give a grant towards the supply of Certified or Grade "A" (T.T.) milk for school children. It was also thought that a grant would be given for all milk from tubercle free herds licensed under this Order which was not being sold as Certified or Grade "A" (T.T.). Provided the demand for Grade "A" (T.T.) milk continues through 1935, I fully anticipate the number of graded herds to be more than doubled by the end of the year.

Ten of the 27 animals which failed to pass the Tuberculin Test were in one herd of 60 cows where there had been no reactors for 18 months and the herd had been put on to a yearly test. From my knowledge of conditions it is reasonable to suppose that the infection in this case came from the pigs on the farm, where a large number was kept. Although these pigs were no more seriously affected with Tuberculosis than usual in a herd of pigs, we have learned in the course of our meat inspection that Tuberculosis did exist among these pigs. This is the first serious re-infection that I have experienced in Dumfriesshire. All the reactors were at once removed. A test was carried out four months later, when only one animal reacted. It was also removed. Other reactors were mostly found in the new or recently licensed premises.

U. PUBLIC HEALTH (MEAT) REGULATIONS (SCOTLAND), 1932.

SLAUGHTER-HOUSES.

The following are supervised by the County Veterinary Staff:—

County—Thornhill	...	...	One public slaughter-house.
Thornhill	...	...	One private slaughter-house for pigs at Bacon Factory.
Kirkconnel	...	...	One private slaughter-house.
Templand	...	...	One private slaughter-house.
Kirkpatrick-Fleming	...	...	One private slaughter-house.
Racks	...	...	One private slaughter-house.
Dornock	...	...	One private slaughter-house.
Burghs—Sanquhar	...	...	One public slaughter-house.
Lochmaben	...	...	One private slaughter-house.
Lockerbie	...	...	One public slaughter-house.

Eight hundred and fifty-five visits were made to slaughter-houses for meat inspection; this is an increase of 196 on the previous year. 34 visits for emergency meat inspection were made to other premises: this is an increase of 13 on the previous year, and would have been more had animals to be slaughtered not been taken to slaughter-houses whenever possible.

Attention is drawn to the very marked increase in the figures under pigs, where the totals exceed those under “bovines except calves.”

The position with regard to meat inspection is now rather more favourable, especially at Thornhill and Lockerbie. With rapid and cheap road transport available, concentration of slaughter in these centres might be considered. In its absence, rigid limitation of days and hours for slaughtering in rural centres would be extremely helpful without causing any great inconvenience to the trade. At Dornock and Racks, where sheep are killed for the London market, no routine examination has been carried out, as the carcasses are examined before sale. Periodic visits of supervision have been made.

In the Burghs of Annan, Langholm, and Moffat the meat inspection is not carried out by the County Veterinary Staff.

APPENDIX I.

Table I.

REGISTERED PREMISES, CLASSIFICATION AND NUMBER OF COWS.

District.	Premises.				Total.	Cows.
	Class 1	Class 2	Class 3	Class 4		
County ...	258	323	442	32	1055	17,773
Burghs ...	1	6	...	...	7	105
County (Retail) ...	...	...	...	...	4	...
Burghs (Retail) ...	...	...	...	...	10	...
Total ...	259	329	442	32	1076	17,878
1926 Total...	49	334	206	131	720	

Table II.

INSPECTION OF HERDS AND PREMISES.

Routine Visits of Inspection	...	...	...	...	...	1126
Plans, Reconstruction, and Improvement of Premises	...				...	131
Total	...	...	...	...	...	1257

Table III.

DISEASES FOUND ON CLINICAL EXAMINATION.

Tuberculosis	...	...	...	...	...	...	See Table V.
Mastitis	...	...	...	...	...	...	439
Indurated Udders, not Tuberculous	...	...	...	...	...	...	194
Teat Eruptions	...	...	...	...	...	...	149
Atrophy (Complete or Partial)	...	...	...	...	...	...	399
Metritis or Retained Placenta	...	...	...	...	...	...	28
Post Parturient Dyspepsia	...	...	...	...	...	...	5
Contagious Abortion	...	...	...	...	...	...	46
Other Diseases	...	...	...	...	...	...	22

APPENDIX II.

Table IV.

LABORATORY EXAMINATIONS.

(i) Bacteriological.

	Acetone.		Tuberculosis.				Pathogenic Organisms excluding Tubercle Bacilli		Bacterial Count and presence of Bac- illus Coli.	Sputa.		Total.
			Micro- scopical.		Bio- logical.							
	+	-	+	-	+	-	+	-		+	-	
1934	...	5	4	246	...	106	39	158	276	36	166	1036
1929	3		41	205	4	30	124	68	53	1	1	53

(iii) Chemical.

Butter Fat Contents 149

Table V.

EXTRACT FROM RETURNS UNDER TUBERCULOSIS ORDER OF 1925.

REPORTS MADE ON ANIMALS ON REGISTERED PREMISES.

	Premises producing Milk, etc.	Premises producing Butter, etc.	Total.
Reports received and examined ...	575	24	599
Cases confirmed and slaughtered ...	135*	8	143
Cases found at "Post-Mortem" to be :—			
(a) Advanced T.B.	52	5	57
(b) Not Advanced T.B.	81	3	84
(c) Not Tuberculosis	1	...	1
Cases confirmed and reported by :—			
County Veterinary Inspectors	67	1	68

* 1 case died before it could be dealt with.

Table VI.

MILK (SPECIAL DESIGNATIONS) ORDER (SCOTLAND), 1930.

NUMBERS OF VISITS, SAMPLES, AND TESTS.

Class of Licence. Producers.						Milk Samples Examined.		Tuberculin Tests.						
Certified	Grade "A" (T.T.)	Grade "A."	Pasteur- ised.	Retailers	Visits.	Bact.	Chem.	Herds, One Test.	Herds, Two Tests.	Routine Tests.	Interim Tests.	Total.	Failed.	Passed.
1	20	2	1	4	299	123	122	6	15	1625	19	1644	27	1617

APPENDIX III.

MEAT INSPECTION BY COUNTY VETERINARY INSPECTORS.

Synopsis showing Meat and Offal condemned.

Bovines except Calves.										Sheep					Calves.			Pigs.								
Carcasses.	Quarters.	Meat—Lbs.	Hheads.	Lungs.	Liver.	Other Offal.	Weight Lbs.		Carcasses.	Quarters.	Mutton—Lbs.	Liver.	Other Offal.	Weight Lbs.		Plucks.	Carcase.	Offal.	Carcasses.	Pork—Lbs.	Hheads.	Liver.	Other Offal.	Weight Lbs.		
							Carcasses.	Offal.						Carcase.	Offal.									Carcase.	Offal.	
61	34	1034	132	192	632	639	27210	16890	18	12	36	517	186	890	2049	52	432	3597	450	67	2131	1599	1747	3925	31764	13036

Report upon Public Assistance Work for Year 1934.

During the year ended 31st December, 1934, the number of persons from whom applications for public assistance were received showed an increase over the previous year of 12, while the number of cases admitted by the Committee to the Roll of Poor was 23 in excess of 1933. There was a slight increase in the number of persons actually in receipt of relief at 31st December, 1934, as compared with the number for the corresponding date in 1933. There has been no change in the numbers of destitute able-bodied unemployed, but a slight reduction is shown in the figures for ordinary and lunatic poor. There is, however, a slight increase in the number of indoor cases.

In the last report it was anticipated that the burden of maintaining the majority of the able-bodied poor would be transferred to the Unemployment Assistance Board, but owing to the withdrawal of the Regulations of the Board this has been delayed and the date of the transfer of these cases is not yet known, but it is expected to be before the end of 1935.

The Poor Law Act which came into force on 1st September, 1934, made several important changes in the administration of Poor Law, the most important of which was that applicants whose settlement is in another area are entitled to have the same rate of relief in the area in which they reside as if their settlement were in that area. It also extends the right of appeal by applicants to the Department of Health and the Sheriff. Another important change is that the Law of Settlement now applies to able-bodied poor in the same way as to ordinary poor.

The following tables contain details of the number and manner of disposal of applications for public assistance during 1934, and of the number of County admitted poor chargeable at the end of the year :

APPLICATIONS FOR RELIEF.

Number of Applications for Public Assistance.

District No.	No. of Applications	Withdrawn by Applicant.	Refused by Committee	Relief offered . not accepted.	Granted Relief.			
					Out-door.	In-door.	Institutional Lunacy Cases, etc.	Total Relieved.
1	222	4	7	5	174	24	8	206
2	95	1	3	3	68	15	5	88
3	224	2	19	2	193	6	2	201
4	109	2	9	5	79	9	5	93
5	111	...	10	9	84	4	4	92
6	76	...	3	1	63	5	4	72
7	29	2	...	...	21	6	...	27
8	53	1	5	...	41	5	1	47
...	7	...	...	...	...	3	4	7
Total	926	12	56	25	723	77	33	833
Total for year 1933	914	21	72	11	703	81	26	810

NUMBER OF REGISTERED POOR CHARGEABLE TO COUNTY.

Classification.	At 31st December, 1934.			At 31st December, 1933.		
	Poor Persons	Depend-ants.	Total	Poor Persons	Depend-ants.	Total.
Ordinary—Outdoor	407	431	841	409	468	877
Do. Indoor	75	6	81	62	19	72
Boarded-out						
Children ...	88	...	88	82	...	82
Lunatic and Mental						
Defective ...	159	...	159	170	...	170
Able-bodied						
Unemployed ...	142	332	474	142	342	484
Totals ...	871	772	1643	865	820	1685

SUSPENSE POOR.

At the end of the year 35 cases were chargeable on the roll of suspense poor. In 32 of these the settlement was still undetermined, the remainder being without any available settlement in Scotland.

LUNATIC POOR AND MENTAL DEFECTIVES.

The following are the details of numbers of this class of poor chargeable to the County at 31st December, 1934 :—

	In Institutions.	Boarded-out.	Totals.
Lunatic Poor	126	8	134
Mental Defectives	17	8	25
Totals	143	16	159
Totals as at 31st December, 1933	155	15	170

VAGRANTS.

The number of vagrants dealt with and relieved during 1934 was 10,337. The three previous years' figures were as follows :—11,117 in 1933, 12,096 in 1932, and 9183 in 1931.

The problem of vagrants is now being considered by the Departmental Committee as reported in the last annual report. Figures and reports have been submitted to the Committee during the past year with regard to the conditions prevailing in this County.

CLAIMS FROM OTHER AUTHORITIES.

Of 190 claims received from Other Authorities, 142 were finally admitted, 27 refused, and 21 were still under consideration at end of year.

CLAIMS AGAINST OTHER AUTHORITIES.

Claims were made against Other Authorities in respect of 91 poor persons becoming chargeable in this County, and of that number 50 were successfully established, 3 refused, and 38 claims remained in dispute at the end of the year.

POORHOUSES.

In June of this year Notwen House was closed and the inmates transferred to Rowantree House, Thornhill, and the Governor of Notwen House was appointed

Governor of the combined institutions at Rowantree House. Alterations have been carried out during the year in this institution, giving increased accommodation. The new arrangement has proved to be very satisfactory.

A caretaker was appointed for Notwen House, and it is still used for the accommodation of the casual poor.

PROSECUTIONS.

Several cases were brought before the Sheriff, in terms of Section 80 of the Poor Law (Scotland) Act, 1845, who were failing to maintain their wives and children. One father was sentenced to imprisonment for 30 days. In three instances the Sheriff continued the cases, and the husbands, finally implementing their obligations, were admonished.

One man defrauded the Authority of the sum of £2 2s, and was sentenced to imprisonment of 10 days.

REMOVALS TO ENGLAND.

During the year warrants for the removal to England in five cases were obtained in terms of the Poor Removal Act, 1862. In only one case, however, was the poor person removed to England under warrant. In two cases employment was obtained, and they ceased to require assistance. One case removed to England voluntarily, and action in the remaining case was withdrawn.

REPAYMENT OF ALIMENT.

The sum recovered from relatives of poor persons, workmen's compensation, etc., amounts to £1328 13s 11d, representing an increase of £315 15s 6d over the previous year.

CHILDREN AND YOUNG PERSONS ACTS.

The following table shows the number of cases dealt with in terms of the above Acts. The Local Government Officers, in their capacity of Infant Life Protection Visitors, paid 136 visits of inspection in these cases.

CHILDREN ACT, 1908-1932.

Dist. No.	No. of Cases. 1st Jan., 1934.	Intimations Received.	Deaths.	Removals, etc.	No. of Cases. 31st Dec., 1934.
1	5	3	...	2	6
2	6	...	...	1	5
3	11	...	...	1	10
4	14	3	...	8	9
5	9	...	...	3	6
6	4	2	...	3	3
7	...	...	...	...	...
8	1	...	...	...	1
Totals	50	8	...	18	40
Previ- ous Year	31	36	3	14	50

VACCINATION DEFAULTERS.

The number of defaulters reported by Registrars and Other Authorities was 89, as per the undernoted table, which indicates the manner in which they were disposed of. Orders to vaccinate were issued to the Medical Officers in 56 cases.

District No.	Successfully Vaccinated.	Certified Insusceptible	Certificates of Postponement.	Certified Not Traced.	Reported to Other Authorities.	Tried before Vaccination.	Still Unvaccinated	Total.
1	5	1	...	...	1	...	...	7
2	1	...	...	1	...	...	...	2
3	9	1	3	...	...	...	...	13
4	14	...	1	...	1	...	...	16
5	12	4	1	2	3	...	...	22
6	2	...	2	...	...	...	...	4
7	11	...	1	2	...	1	...	17
8	3	1	1	1	...	...	...	6
	57	7	9	6	9	1	...	89

TRANSITIONAL PAYMENTS.

The Committee considered and disposed of 521 first claims for Transitional Payments, and re-assessments were

made in 4551 cases. The method of disposal was as follows :—

NEW CLAIMS.

Total Determinations Issued.	Dealt with as follows :—		
	Full Standard Rate.	Reduced Rate.	Nil Assessment.
521	97	310	114

RE-ASSESSMENTS.

Total Determinations Issued.	Dealt with as follows :—		
	Increased Assessment.	Reduced Assessment.	No Change.
4551	2507	1124	920

Average Number of Determinations issued per week, 98.

In addition, 2584 investigations and reviews were made, in these cases no determinations by the Committee being required, the circumstances remaining unchanged.

On 7th January, 1935, the Unemployment Act, 1934, came into force, and the duties under Transitional Payments ceased. An agreement, however, was made between the Unemployment Assistance Board and the County Council for the administration of Part II. of the Unemployment Act in this county.

APPLICATIONS FOR RELIEF FROM PAYMENT OF RATES.

Investigation of the circumstances of persons applying for relief from payment of County rates was again carried out by the Local Government Officers. The number of cases in which reports were obtained and recommendations furnished for the guidance of the appropriate Committee was 255.

OTHER SANITARY WORK.

DISPOSAL OF REFUSE.

Ecclefechan Scavenging District.—On 10th January the Council resolved to acquire, by agreement or otherwise, an area of about 1·18 acres on Kirkconnell Hall estate for the purpose of depositing refuse from the district. Later it was decided that another and smaller area on the same estate would be more suitable. An order for compulsory purchase was made in respect of this, but was withdrawn on the proprietresses of the estate offering another site beside the road leading to Cowthat Glen, which the Committee, after consideration, decided to accept as capable of being made suitable for their purpose.

Complaints regarding accumulation of refuse on the foreshore at Glencaple were investigated, and a report submitted to the Committee. As is usual in small seaside places, the potentialities of the ocean as a receptacle for rubbish are too obvious to be overlooked, and the practice of dumping unwanted material on the beach, in hope that the tide will remove it, or, at least, deposit it opposite some other person's house, is common. The Committee directed that the matter be brought to the notice of the Chief Constable.

A report by the Department of Health's inspector of public cleansing regarding conditions at Moniaive was considered, and arrangements were made to draw the attention of householders to the need for immediate and material improvement, in order to obviate the necessity of the Committee's considering formation of a special scavenging district.

The new site for refuse disposal at Kirkeconnel was almost ready at the end of the year. It is to be hoped that its utilisation will put an end to what has long been a very undesirable state of affairs.

In my report for 1933 I referred to the possibility of co-operation amongst householders in villages in the matter

of refuse disposal, in order to avoid formation of special scavenging districts. The plan has been adopted in Wanlockhead, where a committee of householders has voluntarily undertaken this and sundry other public duties. They have arranged for the periodic collection of refuse and its deposit at a dump some distance from the village, and they are carrying out the work in a very satisfactory manner. It is, I suggest, much to the credit of the people of Wanlockhead that a community, which has probably suffered more severely from industrial depression than any other in the County, should set so admirable an example of civic spirit.

Further consideration was given to the question of replacing the ditch along the upper part of the road known as Peter's Loaning, near Annan, by a sewer, under the powers given by Section 28 of the Public Health (Scotland) Act, 1897. Objection was intimated by owners of premises in the neighbourhood, and the matter was deferred meantime.

Works necessary to remove a nuisance in a field at Howgill Bridge, Annan, caused by the road drain which discharges there being in a foul condition, were authorised.

Notices under Section 40 of the Public Health (Scotland) Act, 1897, were sent in respect of 3 houses. In each case cleansing was carried out in a satisfactory fashion by the householder without further exercise of legal powers by the Committee.

Nuisances were investigated, and intimations sent to owners.

SMALL BURGHS.

BURGH OF ANNAN.

The following is extracted from Mr Rodger's Annual Report :—

Water Supply.—The water supply, as reported previously, is by gravitation, the water being taken from the Granhall Burn, upon which the reservoir is constructed. The catchment area draining into the reservoir extends to 1140 acres, and the reservoir is capable of storing 32,000,000 gallons, being an amount equal to four months' supply to the community. The water is taken from the reservoir to Landheads by one 7" and one 5" main, where it is filtered and stored in a clear water tank, from which tank it is distributed to the town. The analysis of this water shows it to be a good domestic water, free from all impurities. In connection with the bye-pass at the reservoir, and following on the report by Messrs Kyle & Frew, Civil Engineers, Glasgow, the Council decided to carry out the work of widening this bye-pass so that it will be capable at all times of coping with flood water, which if allowed to congest in a small space may cause serious damage to the actual embankment of the reservoir. The Town Council, always alive to the benefits accruing from a good water supply, lifted and renewed the 4" distribution pipes in Bank Street during last summer. The pipes are periodically tested and scoured, and the filter beds and clear water tank are cleaned at regular intervals. No complaints from this branch of the work have been received during the year, and I am pleased to say at no time was there any fear of shortage, or any measure taken warning the community to moderate their demand of water for domestic purposes.

Drainage.—During the year the drainage system has caused no trouble. There have been no complaints regarding the system, and it has been capable of carrying

away all excreta and surface water with which it was taxed. The sewers, owing to lack of fall, have to receive special attention, and during the summer months it has been found that by flushing them periodically the heavier excreta, which has a tendency to lodge in the drain, is kept on the move, and so eliminates the danger of chokages.

Scavenging.—The scavenging of the town is carried out by two horses and two carts, one of the carts being of modern design fitted with pneumatic tyres. The refuse until this year was collected daily throughout the town, but on a review of this method it was found that a great loss of time and expense was caused by the carts travelling over a large area and lifting only a few ashes here and there. This was remedied by dividing the area into two districts and having the refuse collected each alternative day, which system up to the present time has been working smoothly. This system was not carried out in the shops area, as it was found that a daily collection was required here along with an extra collection of paper on a Tuesday afternoon. The refuse is carted to a regulated coup, where it is deposited in layers and steps taken to counteract spontaneous combustion. The number of loads collected during the year was made up as follows :—

Household Refuse .....	.....	.....	1862
Paper from Shops .....	.....	.....	237
Surplus Material .....	.....	.....	30
			<hr/>
			2129

The cleansing of the streets is carried out in an efficient manner, and there have been no complaints received.

Nuisances.—During the year few nuisances were reported, but where these existed the proprietors' attention was drawn to the complaint, and the nuisance in every case was attended to.

Factories and Workshops.—Numerous visits have been made to these premises, and I am pleased to state that they are all kept clean and no action has been necessary.

Housing and Town Planning.—Under the Housing Acts a great number of visitations have been made on the existing houses of the Burgh. Up to the present time 66 houses have been listed and served with Closing Orders, and, on the application of the proprietors, undertakings to repair 30 houses have been accepted, the remainder to be closed. A further list numbering 35 houses is now being considered by the Medical Officer of Health. The Town Council, alive to the necessity of housing the people from houses which are condemned, have proceeded with the erection of 12 houses of three apartments, and have at the present time accepted tenders for a further 16 houses composed of eight 4-apartment houses and eight 3-apartment houses. At this site the Council have purchased ground available to accommodate 28 houses, and a further 12 houses are contemplated to complete this scheme. Under the Housing (Rural Workers) Acts, 1926 and 1931, grants have been issued this year for 4 houses, making a total of 15 since the Council applied these Acts. Water has been installed in a further 13 houses and w.c.'s in 4 houses during the year.

Slaughter-house.—Several repairs were carried out on the slaughter-house during the year, and the premises were lime-washed periodically. The number of animals slaughtered during the year was as follows :—

Cattle	.....	.....	.....	.....	584
Sheep	.....	.....	.....	.....	1953
Pigs	.....	.....	.....	.....	732
Calves	.....	.....	.....	.....	48
Lambs	.....	.....	.....	.....	28

Meat Inspection.—Throughout the year strict surveillance of the slaughtered animals was kept, and it was deemed necessary to seize and destroy under warrant of a magistrate the following animals or parts :

Cattle	....	....	....	....	5½
Sheep	.	....	....	....	9
Pigs	....	....	....	....	3
Calves	....	....	....	....	2
Cattle Livers	....	....	....	....	54
Sheep Plucks	....	....	....	....	67
Pig Pluck	....	....	....	....	1

Schools.—In the Burgh are situated three schools which are visited periodically, and I am pleased to say that no complaint could be found with the manner in which they are looked after.

Dairies, Cowsheds, and Milkshops.—One milkshop exists in the Burgh, and at all times this is kept in a cleanly state and every precaution is taken to ensure that the milk is delivered to the consumer in a pure condition.

Interments.—No interments have been carried out within the Burgh during the year.

Burial Grounds.—Two burial grounds exist within the Burgh boundary, but they have not been in use for a number of years. They are periodically looked after and kept in a cleanly and sanitary condition.

Bye-laws.—The only bye-laws are for the supervision of the slaughter-house. The Town Council are contemplating at the present time the adoption of bye-laws regulating buildings, etc., erected within the Burgh.

BURGH OF LOCHMABEN.

Water Supply.—As a result of regular supervision the waste of water formerly commented on has been materially reduced.

The output of certain springs on White Hill was added to the supply with satisfactory results.

Sewage Disposal.—As indicated on page 85, steps were taken to improve the working of the sewage plant. The settling tanks are not provided with any convenient means of sludging, and an excessive amount of sludge had collected within them. This caused constant fermentation, so that much organic matter which ought to have settled in the tanks was carried forward to the filters, and this resulted in the production of an unsatisfactory effluent. Fortunately the amount of dilution in the loch is such that no evidence of nuisance could be detected a few yards from the inflow.

One of the tanks was cleaned out, and arrangements made for the rapid drying and removal of the sludge. The effluent pipe was carried some distance into the loch and made to discharge well below water level, so that the effluent becomes rapidly and thoroughly diluted. It is proposed to remove the sludge from the second tank during the current year, and it is anticipated that regular removal of sludge and constant supervision should obviate further trouble.

Further reference to the matter will be found in the report on the work of the Chemical Laboratory on page 85.

Housing.—The municipal houses at Halliday Terrace have been visited from time to time and found clean and in good order in practically every case.

Thirty-six housing inspections were made and 12 houses reported to the local authority as unfit for human habitation.

Forty-three houses were renovated under the approved scheme under the Housing (Rural Workers) Acts.

Nuisances.—Sixteen intimations regarding nuisances were issued.

BURGH OF SANQUHAR.

Water Supply.—As noted in last year's report this has been under investigation for some time. On 19th February I reported as follows :—

The combined population of Sanquhar Burgh and of Crawick Special Water District is approximately 2000 persons. The filtering area of the two slow sand filters at the waterworks is 125 square yards. Allowing a filtration rate of 500 gallons per square yard per day (which is about as rapid as is desirable), those two filters could deal with a daily flow of 62,500 gallons.

The amount actually passing through the filters is greatly in excess of that figure. Observations made at various times have shown that from 1200 to 1474 gallons per square yard per day were generally passing, and that only during the night did the flow fall to the neighbourhood of 500 gallons. I note that in his report of 22nd November, 1933, Mr H. M. Ross estimates that at least 1000 gallons per square yard per day are still passing through the filters.

The result of this over-rapid flow is that the sand filters do not function properly, as too great a strain is placed on them. The results of a number of bacteriological examinations have been reported to the Council. Those support the view that there is little difference between the water before and after filtration. This is perhaps less important in view of the generally good quality of the unfiltered water, but I must emphasise the fact that if any accidental pollution of the source should take place, the filters would probably not provide a sufficient barrier to prevent that pollution reaching the consumers. It is from such accidental pollution of an otherwise pure supply that water-borne epidemics usually result.

The obvious explanation of the high water consumpt in the Burgh is that water is being wasted by undetected leaks, and by carelessness of consumers. The late Mr W. C. Easton and, more recently, Mr H. M. Ross have

investigated this matter, and their reports emphasise the need for taking all steps to check waste.

A report by Mr H. M. Ross, dated 4th June, dealt very fully with possible sources of pollution, and recommended measures for their removal. Those comprised :—

- (1) Laying a 6" pipe along the bye-pass, to carry the sewage from Glenries past the point at which it might contaminate the reservoir.
- (2) Renewing the sluice gate at the top of the reservoir.
- (3) Repairing the bank between the reservoir and the bye-pass.
- (4) Carrying the Glendyne and Mossholm supplies into the reservoir.
- (5) Construction of an additional filter.

The pipe carrying the Mossholm supply had already been repaired at the point where it crosses the Fingland Burn. This was originally a fire-clay pipe, bringing water from an intake above any likely source of human pollution. Through lack of oversight the intake had become choked, and some unknown person, with the laudable though misdirected intention of increasing the supply, had made a hole in the pipe where it crossed the burn below Mossholm, so that the water delivered into the reservoir was actually being drawn from the burn at a point where it was obviously open to pollution. The fire-clay pipe was removed and a cast-iron pipe substituted, with properly constructed connections to the main on either bank.

I reported to the Town Council that the proposed remedial works should be regarded as a matter of urgency. Further, that the additional filter would allow of the Burgh supply being filtered in future at a rate of 650 to 700 gallons per square yard per day, and, though this were higher than the rate usually considered desirable, it might be accepted in view of the fact that the water was being collected from clean gathering grounds and would be stored in the reservoir before filtration.

The work was put in hand during the summer and completed in the current year.

It must be remembered that the wholesomeness of a water supply depends not only on the adequacy of the works as constructed but on the supervision which the whole system receives afterwards. That point must always be kept in mind if the Burgh supply is to remain above reproach in the future.

Sewage Disposal.—The sewage works which had been constructed in 1931 produced a satisfactory effluent till March, 1934. Thereafter a very definite deterioration was observed, and evidence of pollution began to appear in the river bed at and below the point of discharge.

The Milk Marketing Board had begun operations at Sanquhar Creamery during December, 1933, and by the middle of the year under review the amount of whey passing into the sewer from the creamery was probably about four times as much as had been allowed for when the works were designed.

A large number of samples of crude sewage, sewage effluent, and river water were examined, and the results confirmed the opinion that creamery waste was responsible for the reduced efficiency of the sewage works.

A conference between the Town Council and the Milk Marketing Board was proposed, but before arrangements for this were made the manufacture of cheese at the creamery was stopped.

The biological filters were thereafter treated with bleaching powder in order to remove the slimy fungus which had formed on them. This was successfully accomplished.

Further reference to the matter will be found in the report of the work of the Chemical Laboratory (page 84).

Housing.—In March, 1934, the Town Council decided to form the whole Burgh into an Improvement Area, under the powers given by Section 6 of the Housing (Scotland) Act, 1930. Bye-laws were drafted, submitted to the Department of Health, and confirmed on 16th November,

1934. The question of making bye-laws under the Burgh Police (Scotland) Act, 1903, and the Housing (Scotland) Act, 1925, was also considered, but it was decided that there was no need for this.

In view of the fact that the necessary housing inspections, consequent on the whole Burgh having been declared an Improvement Area, would occupy a considerable amount of time, and that the work would have to be carried out by the county staff, an arrangement was made by which the County Council would appoint an additional sanitary inspector and the Town Council would make a contribution to his salary materially greater than what they had formerly paid for sanitary services. This arrangement was in process of adjustment at the end of the year.

In view of the terms of the new Housing Bill at present before Parliament, it seems probable that improvement schemes such as that made by the Town Council will be abolished.

Sixty-six houses were reported on in the course of the year. Of those, 46 were regarded as unfit for human habitation.

Slaughter-house.—This has been visited from time to time and found well conducted.

Common Lodging-house.—Only some minor matters regarding furnishings called for comment during the year.

Rubbish Dump.—So far no satisfactory site for a new rubbish dump has been selected, though the Council have been active in their endeavours to find one.

Other Sanitary Work.—Seven intimations regarding nuisances were sent to parties responsible.

BURGH OF LOCKERBIE.

The following is extracted from Mr Walker's Annual Report :—

Water Supply.—The Burgh has an adequate supply of water which is of good quality. The gathering ground situated at Bankhill, about four miles from the town, has a water-shed of 650 acres and is 500 feet above sea level. The rainfall for the district is approximately 54 inches. One inch of rainfall on an acre of land such as our gathering ground is calculated to give 22,622 gallons, which means that our 650 acres with a 54 inch fall will give a supply of 794,032,200 gallons. I have calculated the total annual consumpt from all causes for the Burgh at 60,225,000 gallons, which leaves annually excess water at source to the amount of 342,266,100 gallons. The annual total available supply, 397,016,100 gallons, will be sufficient to supply Lockerbie when it has grown to a little over six times its present size. It does not necessarily follow, however, that there is water to waste. The carrying capacity of the present trunk main is limited, although quite adequate for the needs of the Burgh at present.

Filter Beds.—Two slow sand filters are provided with a total filtering area of 2400 square feet, the filtering medium being Arran sand. The filtered water is passed on to closed-in storage tanks with a total capacity of 240,000 gallons. A power-driven mechanical sand-washer was procured during the year which is proving very useful.

Drainage.—The drainage of the town is on the combined system—that is to say, all the rain water from paved areas, roofs, etc., together with that from sanitary fittings, is collected in one common drain and discharged into the sewers.

I may say that the sewers throughout the town are of ample carrying capacity and gave no trouble during the year.

Sewage Works.—The sewage works are situated well away from the town and have functioned satisfactorily during the year. Particular attention is paid to the de-sludging of the settling tanks, which is carried out by the use of a power-driven diaphragm pump. The sprinkler arms on the contact beds have become very much eaten through. The Town Council have considered this matter, and have decided to have them replaced with new arms in the incoming financial year.

Slaughter-house.—The Burgh slaughter-house, built alongside the Goods Station yard, is well situated and with modern equipment. There is an ever-increasing business in the slaughtering of sheep for the London markets, as the following comparative figures show :—

	1933.	1934.
Bulls	nil.	1
Oxen	485	422
Cows	64	61
Heifers	13	9
Calves	776	648
Sheep	30,970	36,179
Pigs	134	120
	<hr/>	<hr/>
Totals	32,442	37,440
		32,442
		<hr/>
	An increase of	4.998

Removal of Garbage.—Arrangements were made during the year, as an experiment, for the removal of the bulk of the garbage by the Dundas Chemical Company. This has proved satisfactory.

Scavenging.—As in previous years the household refuse continues to be collected by horse and cart, with the exception that the carting is contracted for. Three forenoons in the week are devoted to the collection of the house ash-buckets, and on Friday afternoons a special

the figures are 13, involving 8 herds. The mean deficiency for Kirkcudbrightshire was .27 per cent.

During the year 7 samples, involving 6 herds, contained less than 8.5 per cent. Non-fatty Solids. The Stewartry and Wigtownshire figures are 7, involving 5 herds.

Thirty-nine other samples contained on an average 3.99 per cent. of Fat, the minimum and maximum figures, being 6.1 per cent. and 3.05 per cent. respectively. Only in two cases did the Non-fatty Solids fall below the 8.5 per cent. limit.

WATER—POTABLE.

(a) Special Water District Supplies.

Examination is made of water from the Special Water District every quarter, and half-yearly from Lockerbie Burgh Supply. In no particular case do these call for comment. The actual analyses are given in Appendix 1.

(b) Other Samples.

One hundred and forty-four samples were examined for potability—generally with reference to proposed new supplies or during the investigation of complaints regarding existing ones.

Broadly, they may be classified :—Excellent, 22 ; Good, 67 ; Unsatisfactory, 55.

In two instances the ordinary sanitary analysis was supplemented by an examination of the saline residue, and the following results were obtained :—

All results expressed as parts per 100,000.

Ions.	(1)	(2)
Sodium	5.93	5.13
Potassium	8.57	10.02
Calcium	1.59	2.14
Magnesium	6.20	7.50
Chloride	16.92	25.22
Nitrate NO ₃	8.50	5.02
Sulphate SO ₄	11.96	10.96
Hydrocarbonate HCO ₃	1.66	2.03
Silicic Acid H ₂ SiO ₃		

No. (1) came from a disused well which it was proposed to recondition, but the nature of the surroundings, together

with the unsatisfactory Chemical and Bacteriological results, negatived the idea.

No. (2) came from a well presently in use, and despite the abnormal amount of Nitrates was satisfactory Bacteriologically. The Nitrates are equivalent to 24 grs. Sodium Nitrate per gallon, and are the highest so far obtained in the County.

Partial analyses, either the microscopical examination of Suspended Matter or search for Metallic contamination, were made in 45 cases.

Sand and grit, vegetable debris, with various forms of animal and vegetable life, formed the bulk of the Suspended Matters.

Metallic contamination was frequently due to Iron, generally in suspension and solution, and resulted from the water remaining in contact with iron pipes for long periods. Such waters were generally acid.

In other instances Copper, Lead, and Zinc were found, on one occasion no less than 3 parts per 100,000 of the last named. Further investigation showed that an acid water was rapidly removing the zinc lining of a large galvanised tank.

WATER—RIVER.

Examination was made of samples taken from the Rivers Nith and Annan, the Turnmuir Burn, and the Dalwhat Water. With these may be considered samples taken from the Castle Loch at Lochmaben.

With one exception, sampling was conducted in close proximity to the points of discharge of sewage effluents.

One series of samples was taken from the River Nith in July above and below the outfall from Sanquhar Sewage Disposal Works. These works were then operating under very adverse conditions—a state of affairs due entirely to the intermittent discharge into the sewers of large volumes of creamery waste. The analytical data, and particularly the Biochemical Oxygen Demand, *i.e.*, the “Dissolved Oxygen absorbed in 5 days”—which is a

measure of the Oxygen required for the biochemical oxidation of putrescible matter—showed that for nearly a mile the river was still affected by the effluent. At no point, however, did the Dissolved Oxygen content fall below that required to maintain fish life.

Three similar samples taken in August showed a less unsatisfactory state of affairs, but at that time the river was running strongly as a result of heavy rain.

Towards the end of the year three samples were taken in the River Nith just above the Burgh boundary and opposite the proposed Condensed Milk Factory. They consisted of “Very Clean” water, practically saturated with Dissolved Oxygen.

Samples taken in the River Annan and in the Dalwhat Water, above and below the points of entry of effluents from Moffat and Moniaive Sewage Disposal Works respectively, showed that in neither case was the river materially affected.

On six occasions between February and September samples were taken from the Turnmuir Burn and associated streams. Generally the results confirmed the findings of the previous year, *i.e.*, that the condition of the Turnmuir Burn is not satisfactory during very hot weather, particularly if the volume of water in the streams is small.

Following complaints regarding the condition of the Castle Loch near Lochmaben Sewage Disposal Works, a series of samples was taken near the works outfall.

On a radius of 5 yards from the outfall the effect of the effluent was reflected in the figures for (1) B.O.D. and (2) for Oxygen Absorbed from Potassium Permanganate.

On a radius of 10 yards this effect was much less marked.

The Dissolved Oxygen present was approximately the maximum in every sample. Further sampling in July gave similar results.

At that time the effluent entered the loch by an open channel, but the more satisfactory method of conveying the effluent to a point some 20 to 30 feet from the shore

and discharging it some 2 to 3 feet below the surface has recently been adopted, and the operation of the works has been improved by cleaning out the sedimentation tanks.

At no time, either when collecting samples or when inspecting the works, did the appearance of the loch suggest pollution, and on no occasion was any unpleasant odour detected in their vicinity.

SEWAGE AND SEWAGE EFFLUENT.

Four samples of Sewage Effluent from Thornhill Works had a mean B.O.D. of 2.4 parts per 100,000, the extremes being .5 and 3.5.

All the samples were well nitrified and free from any objectionable odour. Two samples of Tank Liquor taken in the latter half of the year had strengths practically double those taken earlier. This increased strength is due to a larger proportion of slaughter-house waste in the incoming sewage, the result of greater activity at the slaughter-house. These Waste Liquors raise the strength of the effluent, and will necessitate close supervision of these works if they are to be maintained in a high state of efficiency.

Up to the middle of March (and for two previous years) the Sewage Disposal Works at Sanquhar were producing an excellent effluent. From then until the end of the summer the quality of the effluent was far from satisfactory, a state of affairs directly attributable to the presence of Creamery Waste in the Crude Sewage. This Creamery Waste consisted mainly of whey from cheese-making, large volumes of which were discharged at irregular intervals.

The works at Sanquhar, of recent construction, are quite adequate for the normal requirements of the area. They treat a "weak" domestic sewage and operate at or near their full capacity.

In consequence, even small additions of such a highly putrescible liquid as whey have a serious adverse effect.

Samples taken at regular intervals from both sewers

over several days showed that sewage containing creamery waste liquor had strength (M'Gowan) varying from 182-2000 with an average of 1000. In the absence of waste liquor the figures were 31-54, average 41.

For the other sewer, which receives only "weak" domestic sewage, the figures were 52-96, with an average of 65.

These give a rough idea of the great increase in the strength of the sewage when creamery waste is present, and afford some measure of the additional burden thrown upon the filters.

Due to the "buffering" effect of the sedimentation tanks, variations in the strength of the Tank Liquor reaching the filters are much less marked—strength 106-430, with a mean of 253.

For several months not only was the condition of the effluent unsatisfactory, but the filters themselves were covered with various fungal growths, and only careful use of Chlorine (in the form of Bleaching Powder) prevented serious pollution of the river. Rain in August, by increasing the volume of water in the River Nith, materially assisted, but only in the late summer when cheese-making was discontinued did conditions again become anything like normal.

Two Effluents from Kirkconnel had a mean B.O.D. 2.2 parts per 100,000, were well nitrified, and free from odour. Crude Sewage and Tank Liquor from the same works were of weak concentration.

Two samples of Effluent from Moniaive had a mean B.O.D. 2 parts per 100,000. They were fully nitrified, well oxygenated, and free from any objectionable odour. Tank Liquor from the same works was of "average" concentration.

Three Effluents from Moffat were entirely satisfactory, being well nitrified and having a low B.O.D.

Samples of Sewage Effluent from Lochmaben Sewage Disposal Works indicated that these works were not producing an effluent that could be considered satisfactory,

even when due regard was had for local circumstances. The works consist of the usual sedimentation tanks followed by biological filtration. There are two filters, one filled with elinker, the other with whinstone media. The Crude Sewage is of "medium" concentration, and the works are probably operating at or near full capacity.

As is only too frequently the case with works of older design, arrangements for the periodical removal of sludge from the tanks are, to put it mildly, totally inadequate. It was found that retained sludge filled the tanks to a depth of several feet, and as it was then in a state of active fermentation, effective sedimentation of the suspended solids was impossible. The additional burden of dealing with this solid matter overloaded the filters, and an unsatisfactory effluent was the inevitable outcome.

The elinker filter gave a reasonably well nitrified effluent of mean B.O.D. 5.7 part per 100,000, *i.e.*, a "bad filtration effluent" as defined by the Royal Commission on Sewage Disposal. In the whinstone filter there was little nitrification and a mean B.O.D. of 10 parts per 100,000. Both tanks have since been completely emptied of sludge, and the entire works are at present operating satisfactorily.

The problem at Loekerbic is complicated by the presence in the Crude Sewage of large volumes of Creamery Waste—separated milk and whey from cheesemaking. Despite the use of Lime to reduce the acidity of the whey, this effluent is not yet entirely satisfactory.

Further difficulties are the lack of sludging facilities and the practical impossibility of running more than half the filters at once. A power-driven pump has largely overcome the former difficulty, but to remove the latter will involve the renewal of the existing old-fashioned heavy two-arm distributors by the modern light tubular four-arm type.

The application to the filters of Chlorine in the form of a solution of bleaching powder has considerably reduced the possibility of nuisance.

FERTILISERS AND FEEDING STUFFS ACT.

Seven Fertilisers but no Feeding Stuffs were received. In each case the composition of the Fertiliser was in accordance with the statement on the invoice, account being taken of the appropriate Limits of Variation.

MISCELLANEOUS.

In two cases of suspected sheep poisoning examinations were made of portions of the viscera, but with entirely negative results.

Disinfectant largely advertised for use in dry closets was found to consist mainly of "neutral oils" and water.

Fatty Matter found on the filters at Thornhill resembled that picked up on the same filters some years ago. It consisted of free fatty acids, lime soaps, and undecomposed fat.

Floating Solid recovered from the grit chamber at Sanguhar Sewage Disposal Works contained a large proportion of butter fat. It evidently originated from the Creamery.

The other miscellaneous samples, which include vegetable growth and silt from a large water tank, and paper (Education Committee), present no unusual features.

Work done for the Public Health Department is summarised as follows :—

Table No. 2.

PUBLIC HEALTH DEPARTMENT.

Milk (Certified, Grade A.T.T., and Grade A)	..	110	
Other	... ..	39	
			149
Water (1) Potable.			
(a) Special Water District Supplies	...	74	
(b) Others.			
Excellent	... ..	22	
Good	... ..	67	
Unsatisfactory	... ..	55	
			141
(c) Partial	... ..	45	
(2) River	... ..	66	
			329
Sewage and Sewage Effluent	... ..	...	157
Fertilisers	... ..	...	7
Miscellaneous	... ..	...	8
			—
			650

Under the Food and Drugs (Adulteration) Act, 1928, 186 samples of articles of Food and Drugs were submitted on behalf of the Joint Committee. These are considered later (page 89).

KIRKCUDBRIGHT COUNTY COUNCIL.

The County Veterinary Inspector submitted 111 samples of Milk. These were taken from Graded Herds or otherwise in connection with the Milk (Special Designations) Order (Scotland), and for comparative purposes have been considered with those taken in Dumfriesshire.

Of 50 samples of Water examined for potability, 21 were reported unsuitable and 7 of doubtful purity.

One sample examined for metallic impurity contained a small amount of lead. Another sample contained "tar acids" .01 part per 100,000, and gave a positive test for "tar bases."

Two samples of water from the River Nith collected opposite the proposed Condensed Milk Factory consisted of "very clean" water.

One hundred and nineteen samples of Food and Drugs also submitted are considered later (page 89).

WIGTOWNSHIRE COUNTY COUNCIL.

During the year 67 samples of Milk taken under the Milk (Special Designations) Order (Scotland) were received. They are considered with those taken in Dumfries and Kirkcudbright.

Of 11 samples of Water examined for potability, 7 were reported as unsuitable for dietetic use.

Two samples of Water from the Inch Burn at Sorbie consisted of "clean" river water.

One hundred samples of Food and Drugs submitted by the County Sanitary Inspector and the Sanitary Inspector for Stranraer are considered with the other Food and Drugs samples.

FOOD AND DRUGS ACT.

Four hundred and five samples in all were submitted by the Joint Committee of Dumfriesshire and the County Councils of Kirkcudbrightshire and Wigtownshire. Particulars of these are shown in Appendix 2.

Details of the 45 samples (11 per cent.) certified as not genuine are given in Table No. 3.

Table No. 3.

Adulterated Samples.

Milk.

DUMFRIES.

Sample No.	Fat.	N.F.S.	Ash.	Δ	Remarks.	
418	2.90	8.66	.72	...	Def. Fat 3%	
440	2.91	8.61	.73	...	do. 3%	
445	2.94	8.70	.78	...	do. 2%	
462	2.87	8.88	.77	...	do. 4%	
377	2.90	8.06	.71	.498	do. 3% ;	Added Water 5%
378	3.10	8.10	.69	.504		do. 4%
379	3.14	8.07	.69	.501		do. 5%
380	3.08	8.08	.76	.487		do. 5%
512	2.66	6.91	.63	.442	do. 11%	do. 18.7%
513	3.20	6.71	.61	.391		do. 21%
514	2.88	6.81	.59	.419	do. 4%	do. 19.9%
515	2.30	6.43	.58	.417	do. 23%	do. 24.3%
516	2.98	7.00	.64	.426		do. 17.6%
517	3.17	7.56	.67	.481		do. 11%
518	3.15	7.59	.66	.483		do. 10.7%
519	2.99	7.00	.61	.431		do. 17.6%
510	2.95	7.15	.60	.440*	do. 2%	do. 15%
511	2.90	7.08	.62	.440*	do. 3%	do. 16%

KIRKCUDBRIGHT.

366	2.13	8.60	.72	...	do. 29%	
-----	------	------	-----	-----	---------	--

WIGTOWN.

1	2.72	6.99	.58	.45	do. 9%	do. 17%
13	2.90	8.60	.72	...	do. 3%	
38	3.15	7.69	.67	*	(Sour)	do. 9%

* Informal Samples.

Mincee and Sausages.					
DUMFRIES.		Sulphite Preservative			
No. of Sample.		p.p.m. Sulphur Dioxide.			
527	Mince ...	...	...	...	1070
524	Mince ...	...	...	...	1050
529	Mince ...	...	...	...	1030
531	Sausage Roll ...	...	...	...	780
530	Sausages	...	...	...	470
525	Mince ...	...	...	...	190
526	Mince ...	...	...	...	110
532	Mince ...	...	...	...	70
537	Mince ...	...	...	...	40
523	Mince*	...	...	...	840
KIRKCUDBRIGHT.					
653	Sausages	...	...	...	900
565	Mince ...	...	...	...	300
241	Mince ...	...	...	...	130
WIGTOWN.					
44	Sausages	...	...	...	800
1025	Sausages*	...	...	...	970
2	Sausages*	...	...	...	580
3	Mince*	...	...	...	1050
5	Mince*	...	...	...	370

Other Samples (Informal).

DUMFRIES.	
No. of Sample.	
405	Calcined Magnesia ... Loss on Ignition = 9.20
436	Calcined Magnesia ... Loss on Ignition = 11.90
438	Calcined Magnesia ... Loss on Ignition = 13.15
407	Calcined Magnesia ... Consisted of light Magnesium Carbonate.
KIRKCUDBRIGHT.	
No. of Sample.	
477	Barley ... Sulphite Preservative equivalent to Sulphur Dioxide, 18 parts per million.

The number and percentage of the adulterated samples would appear to show a substantial increase on that of the preceding year (18 samples, 4 per cent.), but in fact all the Dumfriesshire milk samples which contained added water came from one source. Successful proceedings were instituted with regard to samples Nos. 512-519, the charge being based on No. 519, which represented the bulk supply.

Samples Nos. 512-518 were taken from the individual churns. The total volume of milk consigned appeared to contain not less than 16 gallons of added water. In these cases the presence of water was clearly brought out by the figures obtained in the Freezing Point tests though the 8.5 per cent. Limit for Non-fatty Solids remains the basis for calculating the proportion of extraneous water.

Convictions were also obtained in Milk Samples No. 366 (Kirkeudbright) and No. 1 (Wigtown).

Milk No. 38 (Wigtownshire) consisted of the 3rd portion of a formal sample which had been broken in transit. The sample had been taken on the request of a wholesale buyer, and I learned later that on the day following the milk supply from that farm decreased by no less than 12 gallons.

The Public Health (Preservatives, etc., in Food) Regulations (Scotland) permit the presence of Sulphite Preservative in amount not exceeding 450 parts Sulphur Dioxide per million in Sausages and Mince—the latter during the period May-September only. The Mince samples were all taken after September.

In several cases the amounts found were far in excess of the maximum permissible limit, and successful proceedings were instituted in 12 cases (Appendix 3).

Generally charges are based on Section (2), *i.e.*, of selling to the prejudice of the purchaser an article not of the nature, quality, or substance demanded.

Several of the Dumfries charges were based on Section (1), *i.e.*, of selling an article "rendered injurious to health," and for which more severe penalties may be imposed.

In one instance Magnesium Carbonate was supplied in lieu of Calcined Magnesia. In the other cases where there was an excessive loss on heating, the probable explanation is carelessness in storage.

In the case where Sulphite Preservative was found in a Barley sample (Informal), subsequent formal samples were satisfactory.

NATIONAL HEALTH INSURANCE.

During the year 14 Medicines were received from the various Insurance Committees. They consisted of 8 liquid and 6 solid medicaments, the latter comprising 4 powders and 2 ointments.

With one exception—where Caffeine Citrate had been supplied for Caffeine—the analytical results indicated a high degree of precision in dispensing.

SUNDRY.

Analyses are also made for local authorities and approved individuals in the area.

The Lochmaben Water Supply, untreated, is unsuitable for steam raising, and for several years the boiler feed water at the Sanatorium has been treated with Lime and Soda. To ensure that such additions, while adequate, are not excessive, periodical examination is made of water from the boilers. The boiler-house staff also make tests for alkalinity on the feed water. Treatment has now become largely a matter of routine, and during the year 13 tests sufficed.

Other miscellaneous samples number 50, and they may be summarised thus:—

Water.....	.....	.....	.....	28
Fertilisers	.....	.....	.....	14
Milk (1 Human)	.....	.....	...	4
Viscera	.....	.....	.....	1
Disinfectant	.....	.....	.....	1
Concrete	.....	.....	.....	2

Apart from the viscera, which contained arsenic, they call for no particular comment.

Appendix 4 shows the origin and nature of the various samples submitted throughout the year,

JOHN W. HAWLEY.

District.	Quarter.	Total Solids.	Saline Residue.	Volatile Matter.	Chlorine. (Cl).	Nitrates (N_2O_5).	Nitrites (N).	Saline Ammonia.	Albuminoid Ammonia.	Oxygen absorbed in 4 hours.	Iron (Fe).	pH Value.
Lower Annandale	...	9.92	7.76	2.16	1.30	.154	Nil.	.0008	.0070	.333	.006	8
	Do.	8.24	5.28	2.96	1.10	.092	Nil.	trace	.0062	.159	.003	8
	Do.	8.96	5.44	3.52	1.30	.154	Nil.	.0006	.0086	.347	.005	7½
	Do.	9.52	6.72	2.80	1.00	.185	Nil.	.0006	.0052	.265	Nil.	8½
	Do. ...	7.04	6.80	.24	1.00	.123	Nil.	.0010	.0070	.101	.003	8½
	Do. ...	8.72	6.72	2.00	1.10	.123	Nil.	.0014	.0090	.089	.010	8
	Do. ...	9.84	7.12	2.72	1.2	.123	Nil.	.0014	.0080	.286	.007	8
	Do. ...	7.84	7.04	.80	1.1	.062	Nil.	.0010	.0080	.171	.003	8½
	Do. ...	10.80	8.08	2.72	1.4	.123	Nil.	.0012	.0070	.274	.005	8
	Do. ...	10.16	6.56	3.60	1.0	.185	Nil.	.0012	.0202	.386	.015	7.1
Bankshill	...	8.72	4.56	4.16	.90	.092	Nil.	.0012	.0092	.196	.025	7.4
	Do. ...	10.04	6.72	3.32	.90	.123	Nil.	.0012	.0134	.371	.007	7.2
	Do. ...	19.36	17.60	1.76	1.10	.216	Nil.	Nil.	.0032	Nil.	Nil.	8
	Do. ...	19.72	15.04	4.68	1.10	.185	Nil.	.0008	.0082	.196	Nil.	8
Blackshaw	...	18.80	13.52	5.28	1.3	.185	Faint reaction.	Nil.	.0006	Nil.	trace	8½
	Do. ...	16.60	13.2	3.4	1.00	.154	Nil.	trace	.0030	.060	trace	7.1
	Do. ...	14.88	8.96	5.92	1.70	.77	Doubtful reaction.	Nil.	.0010	Nil.	Nil.	6½
	Do. ...	11.60	8.00	3.60	1.60	1.608	Nil.	Nil.	trace	Nil.	.005	6½
Crawick	...	8.96	6.72	2.24	1.70	.771	Nil.	Nil.	.0008	Nil.	trace	6½
	Do. ...	9.04	6.16	2.88	1.7	.678	Nil.	trace	.0024	Nil.	.003	5½
	Do. ...	7.08	5.36	1.72	1.10	.062	Faint Reaction.	.0060	.0078	.137	Nil.	7
	Do. ...	5.72	2.80	2.92	1.00	.062	Nil.	.0006	.0030	.062	Nil.	7½
Dumfries Landward	...	6.48	4.40	2.08	1.40	.093	Nil.	.0006	.0024	.087	.004	8
	Do. ...	8.64	5.28	3.36	1.0	.046	Nil.	.0006	.0042	.069	.008	7.1
	Do. ...	14.32	12.24	2.08	1.40	.648	Nil.	.0014	.0104	.323	Nil.	8
	Do. ...	13.52	9.52	4.00	1.30	.678	Nil.	.0012	.0128	.278	.005	8
	Do. ...	15.60	11.12	4.48	1.50	.062	Nil.	.0012	.0260	.323	.026	8
	Do. ...	12.48	7.84	4.64	1.5	.494	Doubtful Reaction.	.0018	.0160	.371	trace	7.8

Appendix No. 1 —continued.

District.	Quarter.	Total Solids.	Saline Residue.	Volatile Matter.	Chlorine (Cl).	Nitrates (N ₂ O ₅).	Nitrites (N).	Saline Ammonia.	Albuminoid Ammonia.	Oxygen absorbed in 4 hours.	Iron (Fe).	pH Value.
Eaglesfield	1	17.20	13.76	3.44	1.10	.370	Nil.	Nil.	.0010	Nil.	.008	8
Do.	2	19.32	13.20	6.12	1.00	.247	Nil.	trace	.0022	.024	trace	8
Do.	3	15.92	11.84	4.08	1.30	.247	Nil.	Nil.	.0006	Nil.	.003	7½
Do.	4	18.24	14.24	4.00	1.2	.308	Abundant	.0006	.0022	Nil.	.007	8
Ecclefechan	1	20.88	14.64	6.24	1.50	.463	Nil.	Nil.	.0016	Nil.	Nil.	8
Do.	2	19.44	15.68	3.76	1.2	.833	Nil.	trace	.0022	Nil.	Nil.	7½
Do.	3	18.08	14.48	3.60	1.20	.308	.080	trace	trace	Nil.	.003	8
Do.	4	19.36	15.12	4.24	1.5	.524	Nil.	trace	.0020	.004	trace	8½
Glencaple	1	16.24	9.84	6.40	2.60	.837	Nil.	.0006	.0078	.067	.003	8
Do.	2	17.12	10.72	6.40	2.40	2.139	Nil.	.0010	.0052	.073	.025	8
Do.	3	18.88	10.24	8.64	2.50	1.928	Nil.	.0006	.0084	.113	.006	8
Do.	4	16.88	10.80	6.08	2.65	1.284	Nil.	.0006	.0054	.037	.004	7.1
Kirkconnel	1	4.76	3.92	.84	1.00	.062	Faint reaction.	.0006	.0038	.276	.003	7
Do.	2	16.40	13.76	2.64	1.00	.031	do.	trace	.0036	.089	trace	8
Do.	3	7.92	6.48	1.44	.90	.062	Nil.	.0064	.0026	.090	Nil.	8
Do.	4	21.92	19.60	2.32	1.10	.092	Nil.	.0008	.0030	.058	Nil.	8½
Do.	3	6.08	3.76	2.32	1.20	.062	Nil.	trace	.0082	.510	.007	8
Do.	3	16.08	11.84	4.24	1.50	.062	Nil.	trace	.0082	.232	trace	8½
Do.	4	9.12	5.20	3.92	.80	.046	Nil.	.0008	.0046	.193	.006	7.6
Do.	4	19.28	14.88	4.40	1.0	.185	Nil.	.0010	.0032	.083	.008	8
Lockerbie Burgh	2	14.80	12.24	2.56	1.0	.216	Nil.	.0012	.0082	.137	.005	8
Do.	4	12.80	10.64	2.16	1.3	.247	Nil.	.0008	.0092	.203	.003	8½

District.	Quarter.	Total Solids.	Saline Residue.	Volatile Matter.	Chlorine (Cl.)	Nitrates (N ₂ O ₆)	Nitrites (N)	Saline Ammonia.	Albuminoid Ammonia.	Oxygen absorbed in 4 hours	Iron (Fe).	pH Value.
Moniaive	1	7.12	5.52	1.60	1.20	.092	Nil.	.0010	.0070	.190	.009	8
	2	8.56	6.64	1.92	1.00	.062	Nil.	.0012	.0136	.150	.005	8½
	3	8.00	6.00	2.00	1.2	.123	Nil.	.0014	.0134	Nil.	.003	8½
	4	7.60	4.80	2.80	1.1	.092	Nil.	.0012	.0054	.074	.003	7½
Netherwood, Kelton, and Craigs Do.	1	10.88	7.12	3.76	1.90	.370	Decided reaction	.0016	.0104	.133	trace	8
	2	15.64	12.24	3.40	1.40	.370	Doubtful reaction	.0012	.0098	.030	Nil.	8½
	3	6.16	4.00	2.16	1.4	.308	Doubtful reaction	.0006	.0058	.042	.012	8½
	4	16.56	12.32	4.24	1.6	.216	Nil.	.0008	.0042	.043	trace	8½
Penpont	1	8.40	7.36	1.04	1.00	.184	Nil.	.0010	.0020	.012	.006	6½
	2	8.72	6.72	2.00	1.10	.092	Nil.	.0010	.0014	.012	.020	6½
	3	8.48	6.16	2.32	1.60	.123	Nil.	Nil.	.0014	Nil.	.003	6½
	4	8.72	4.72	4.00	1.1	.154	Decided reaction.	.0006	.0020	Nil.	trace	6½
Ruthwell and Raffles Do.	1	15.12	13.60	1.52	1.50	.185	Nil.	.0012	.0084	.031	Nil.	9½
	2	12.08	7.44	4.64	1.80	.430	Nil.	.0012	.0052	.154	.003	8
	3	9.60	8.08	1.52	1.60	.154	Doubtful reaction	.0012	.0058	.088	.003	8
	4	11.60	7.00	4.60	1.9	.494	Nil.	.0016	.0150	.171	.005	7.1
Rowanburn	1	11.20	9.52	1.68	1.10	1.376	Nil.	trace	.0038	.033	trace	6½
	2	10.24	6.54	3.70	1.00	1.27	Nil.	.0008	.0036	.020	.006	8½
	3	13.92	9.04	4.88	1.1	1.00	Nil.	.0016	.0138	.116	trace	6
	4	10.88	6.32	4.56	1.3	.875	Doubtful reaction.	.0012	.0048	.078	.005	6.3
Thornhill	1	8.16	5.84	2.32	1.10	.123	Faint Reaction	Nil.	.0018	.157	Nil.	7
	2	9.44	5.84	3.60	1.00	.278	Nil.	.0014	.0022	.030	.003	6½
	3	9.28	6.00	3.28	1.40	.123	Nil.	Nil.	.0018	.075	.005	7½
	4	11.12	6.40	4.72	1.1	.185	Faint reaction	trace	.0018	.016	.008	6.6

Appendix 2.

Table showing the Number and Nature of Samples received under the Food and Drugs Act.

Article.	County Councils of			Total	Adulterated.
	Dfs.	Kbt.	Wig.		
Milk	88(18)	28(1)	30(3)	146	22
Milk (Condensed ... ..	...	...	2	2	...
Cream ... ..	...	...	1	1	...
Butter	18	5	8	31	...
Margarine ... ..	...	10	2	12	...
Cheese	1	...	3	4	...
Lard*	14	3	2	19	...
Mince	11(8)	4(2)	7(2)	22	12
Sausages	6(2)	2(1)	11(3)	19	6
Tinned Tongue ... ..	...	...	2	2	...
Kidney Soup ... ..	...	...	1	1	...
Irish Stew... ..	...	...	1	1	...
White Pudding ... ..	...	...	1	1	...
Pepper	3	5	2	10	...
Mustard	1	...	...	1	...
Mixed Pickles ... ..	...	...	2	2	...
Tea ... ..	...	13	2	15	...
Coffee	8	1	5	14	...
Cafe au Lait ... ..	...	...	1	1	...
Cocoa ... ..	...	4	...	4	...
Sugar ... ..	...	6	...	6	...
Jam (Stiffening Agents) ... ..	...	...	2	2	...
Honey ... ..	...	...	1	1	...
Spirits ... ..	...	11	3	14	...
Beer ... ..	...	...	1	1	...
Soda Water	1	...	...	1	...
Barley ... ..	...	11(1)	...	11	1
Rice	1	3	...	4	...
Ground Rice	1	...	...	1	...
Flour	1	...	...	1	...
Cream of Tartar	10	7	5	22	...
Baking Soda ... ..	...	4	1	5	...
Ground Ginger	2	1	...	3	...
Cinnamon	3	1	...	4	...
Ground Almonds ... ..	...	...	1	1	...
Drugs.					
Oil—Olive	3	...	...	3	...
Oil—Almond	2	...	...	2	...
Oil—Camphorated ... ..	...	...	1	1	...
Glycerine	2	...	...	2	...
Epsom Salts	2	...	...	2	...
Gregory Powder	1	...	...	1	...
Liquorice Powder	2	...	...	2	...
Seidlitz Powder	1	...	...	1	...
Calcined Magnesia	4(4)	...	...	4	4
Milk of Magnesia ... ..	...	...	1	1	...
Extract Cascara ... ..	...	...	1	1	...
Total	186(32)	119(5)	100(8)	405	15

* Includes one compound.

waste-paper collection is made in the shop areas, the paper being conveyed to a site well away from the town, where it is burned.

• **Refuse Coup.**—The refuse tip is on the site of an old pond in close proximity to the town. The soil being of a peaty nature is easily excavated, and is laid aside for covering over the refuse. The approximate tonnage of refuse for the year is as follows :—

Household Refuse .....	.....	.....	1200 tons.
Waste Paper .....	.....	.....	130 tons.
Surplus Material .....	.....	.....	100 tons.
<hr/>			
Total .....	.....	.....	1430 tons.

Schools.—The only school situated in the town is Lockerbie Academy—a building of modern construction with up-to-date sanitary fittings.

Workshops.—The number of workshops in the Burgh is 23. They are all regarded as satisfactory.

Factories.—There are no factories situated within the Burgh.

Common Lodging-house.—There is only one common lodging-house within the Burgh, which meets the needs of the district and is conducted in a satisfactory manner.

Burial Grounds.—There is one burial ground situated within the Burgh, and the interments now are very few, as the rights of burial there are limited.

Nuisances.—Inspections were made from time to time for the abatement of any nuisances that occurred in the town, which were rectified without trouble.

Bakehouses.—There are five bakehouses situated within the Burgh, all of which are in good order.

Dairies.—There are two registered dairies within the Burgh, which were inspected frequently and found to be in order.

Sanitary Conveniences.—Under Section 246 of the Burgh Police (Scotland) Act, 1892, two notices were served for the providing of houses with inside water supplies and sinks, which have been complied with. Great care has had to be exercised in carrying out this work owing to the number of houses that are being considered unfit under the Housing (Scotland) Act, 1930.

The number of houses without water supplies and sinks inside are 25 in number. These are as follows :—

- 6 single taps serving 2 tenants.
- 2 single taps serving 3 tenants.
- 5 single taps serving 1 tenant.
- 1 single tap serving 1 tenant.

Number of water-closets used in common are :—

Serving 2 tenants	13
Serving 3 tenants	2
Serving 4 tenants	1
Serving 5 tenants	0

Under the Housing (Scotland) Act, 1930, inspections of houses have been carried out throughout the town by Dr Ritchie, Medical Officer of Health for the Burgh, and myself. An abstract of the report is as follows :—

Total number of houses inspected	480
Houses considered unfit for habitation	67
Houses where persons are living under over-crowded conditions	24
Families living with relatives or in sub-lets or in lodgings	7
Persons desirous of getting married for whom no houses are available	1
Total	99

Among the 24 overcrowded houses there are
 10 classed as not habitable, and these
 are included in the 67 unfit houses,
 which leaves a net figure of 89

The report further recommends that of the above
 the urgent cases were :—

Houses unfit for habitation	.....	40
Cases of overcrowding	.....	5
Necessitous cases	.....	8
		<hr/>
Total	.....	53

and that the building programme spread over the five years' period referred to in the Act should comprise the erection of 22 blocks of four houses each, of which 53 should be taken in hand this year. After full consideration by the Council, it was decided to carry on with the erection of 40 houses immediately.

BURGH OF MOFFAT.

The following is extracted from Mr Sanson's Annual Report :—

Water.—The Burgh is fortunate in having an excellent water supply ; it is derived from springs which rise on the lands of Granton, about three miles from the town. The location of the springs is near the head of the Annan Valley, the catchment area being wholly hill pasture and well removed from any likely means of contamination. No filtration is necessary ; the water is collected by means of wells and a large underground concrete tank, from which it is passed direct into the trunk mains serving the Burgh. Repair work was continued during the year. 1179 yards of 2½" to 3" cast-iron distribution pipe was renewed, and periodical inspections of water fittings were made in several districts of the Burgh.

One complaint was received regarding the quality of the water. On investigation it was found that the premises were being supplied from the end of a pipe line. A scour has now been fitted and the pipe is being flushed at regular intervals. Throughout the past twelve months the daily average consumpt has been 96·5 gallons per head of population, this being an increase of 4 gallons compared with the consumpt for the year ending 31st December, 1934. Careful observations were again kept at the wells and tanks during the summer months, and it was found that the springs provided an ample supply and that the flow could be increased if required. The average daily consumpt throughout the year was 233,600 gallons.

Housing (Inspection of District) Regulations (Scotland), 1928.

With reference to the 14 houses referred to in my previous report as being unfit for habitation, the Council have now dealt with them as follows :—

To be demolished	.....	.....	.....	10
To be reconstructed	.....	.....	.....	3

and in one case an undertaking was accepted that the house would not be let as a dwelling-house.

Housing (Scotland) Act, 1925.

Number of cases where intimations were given under Section 20 (1) as to insufficient water-closet accommodation :—

(a) Cases where requirements were complied with by owners	.....	.....	.....	3
(b) Cases where work carried out by Local Authority after failure of owners to do so	.....	.....	.....	nil.
(c) Cases still pending	.....	.....	.....	4

Housing (Scotland) Act, 1930.

Number of houses in respect of which notices were served in terms of Section 16 (1)	.....	.....	.....	14
(a) Number which have been rendered fit for habitation	.....	.....	.....	nil.

(b) In respect of which an undertaking has been given that the house will not be used for human habitation	1
(c) In respect of which demolition orders have been made under Section 16 (3)	7
(d) In respect of which closing orders have been made under Section 16 (3) and (4)	nil.

Housing (Rural Workers) Acts, 1926 and 1931.

Applications for assistance in aid of the reconstruction and improvement of houses	4
Number of applications which were approved and assistance granted	4

There does not appear to be any lack of housing accommodation in the Burgh at present. Two houses belonging to the Town Council were recently advertised; 12 applications were received, all of which were from persons who already had the tenancy of a house.

A survey of all working-class houses is now being carried out. When this has been completed, the Council will then take steps to deal with all uninhabitable or defective dwellings and also to abate overcrowding.

The Council have now in course of erection at their Rogermoor site 16 houses, comprising:—

4 blocks of 3-apartment bungalows	8 houses.
1 block of 3-apartment flats	4 houses.
1 block of 4-apartment flats	4 houses.

all of which are expected to be ready for occupation in November, 1935.

Common W.C.'s.

Serving two tenants	4
Houses without water and sink inside house	2
Dry closets	nil.
Privy middens	nil.
Ash-pits	nil.

Sewerage and Sewage Works.—Being a residential town, there is no complication of the sewage problem such as occurs in most industrial areas, but the efficiency of the disposal works is being greatly impaired by the great amount of sub-soil water which is finding its way into the sewers. This sub-soil water has all along operated against obtaining the best results. The works are also greatly affected by the amount of surface or storm water which has to be dealt with, as this introduces varying conditions of volume from time to time. Efforts have been made to relieve the sewers of this sub-soil and surface water, and some good results have been obtained. The exclusion of all but crude sewage is, however, a comparatively large matter to deal with, involving as it would a new system of independent drains.

Storm overflows have been formed at several points on the trunk sewers. These serve a very good purpose, but have the great disadvantage of allowing crude sewage to be discharged into the river, and care should be taken to see that these overflows only function during very heavy rainfall. The daily average flow of sewage effluent from the works for the year ending 31st December has been 254,000 gallons, this being 20,900 gallons per day in excess of the daily average water consumption of the Burgh. No estimate can be given of the amount of water passing from the sewers to the storm overflow pipes, but during wet weather this flow must be very considerable.

Cleansing.—As mentioned in my previous reports, the cleansing of the Burgh is carried out by the Burgh workmen, and except in a few instances the daily removal system is in operation. The refuse is carted to a dump outside the Burgh boundary, two horse vehicles being used for this work. The quantity of household refuse and street sweepings removed daily averages four tons per day. Care is taken to prevent the ash-bing from catching fire, and the refuse, which is kept free from waste-paper and tins, etc., is spread in layers and top dressed with road scrapings or other suitable material.

With a view to keeping the main streets of the Burgh in a tidy condition during the week-ends, the cleansing department are at work for two hours on Sunday mornings. This arrangement is found to be well worth while, as much litter is left at bus stances and parking places.

The public conveniences in the Burgh receive careful attention, and are kept in a thoroughly sanitary condition. A new ladies' and gentlemen's cloak-room has been erected at the station park: the building is of tasteful design, and supplies a long-felt want at this park.

Nuisances.—Seventeen complaints were received during the year. These were enquired into, and steps were taken to secure the abatement of the nuisance when this was considered necessary. The number of nuisances dealt with was 26. In cases where intimations were served under Section 19 of the Public Health (Scotland) Act, 1897, these were readily attended to. It was not found necessary to send out any statutory notices in terms of Section 20 of the Act. The nuisances were as usual mostly choked drains and water-closets, defective sanitary fittings, and structural defects.

Slaughter-house.—This is the property of the Local Authority, and continues to be well maintained. Acting as Detention Officer under the Meat Inspection Regulations, I have visited the premises regularly. I have found no carcasses presenting appearances of disease or conditions requiring the attendance of the Meat Inspector. There is no private slaughter-house in the Burgh.

Animals slaughtered during the year numbered:—

	1934.	1933.
Cattle	179	234
Sheep	754	1733
Pigs	27	15

Schools.—The schools in the Burgh were visited periodically throughout the year. In each case it was found that the premises continue to be maintained in a highly satisfactory manner.

Factories and Workshops.—Factories and workshops have been found to be in a satisfactory condition when inspected. 128 visits were made to these premises during the year. At one bakehouse the owner was requested to lime-wash part of the walls, and in three other cases it was suggested to the owners that the windows should be cleaned and made to open. There are no home-workers within the meaning of the Factory and Workshops Act.

Common Lodging-house.—There is no lodging-house in the Burgh. There is a shelter-house where vagrants are given shelter for one night. The accommodation available is not sufficient for the housing of the many vagrants who pass through this district, with the result that the room for males is very often overcrowded. The premises are visited nightly by the police, and the duties of the keeper and his wife are carried out in a highly satisfactory manner.

Dairies.—There is one retail milkshop which sells milk produced outside the Burgh. Nine inspections have been made during the year, and on each occasion the premises were found to be in a cleanly state.

Burial Ground.—The burial ground in the Burgh is under the control of the Town Council. There have been no interments in this graveyard during the year under review, and it is kept in very good order.

BURGH OF LANGHOLM.

The following is extracted from Mr Oliver's Annual Report :—

Water Supply.—There have been no alterations made to the water supply during the year, and the existing system continues in quality and quantity to meet satisfactorily the needs of the Burgh.

The springs from which the supply is derived were inspected on two occasions, when the gathering ground,

catch-boxes, etc., were found to be in a clean, wholesome condition, free from any indications of contamination.

Careful testing to prevent leakage has been carried out, and the whole system, pipes, fittings, etc., have been properly maintained by the Burgh Surveyor's department.

Drainage and Sewage Purification.—The drainage and sewerage system, which is of recent construction, has been regularly flushed, dragged, and maintained in efficient working order throughout the year.

The main sewers were extended in connection with West Street housing scheme and Mr Graham's housing development site at Walter Street. In both cases the work, which was carried out under my supervision, was properly executed.

All connections to main sewers as well as all work in connection with private drainage systems were inspected and tested before being put into use.

The sewage disposal works, which were designed by Gilbert Thomson, Esq., in 1923, are situated beside the river Esk at Landsend. The effluent, which is almost entirely domestic, passes through (1) screening chambers, (2) catch-pits, and (3) precipitation tanks before being finally discharged into the river Esk. The works are well constructed, the screening chambers, catch-pits, and tanks totally enclosed, and every reasonable precaution has been taken to prevent a nuisance arising therefrom.

The routine maintenance work has been properly attended to throughout the year, the effluent discharged into the river Esk has been satisfactory, and 237 loads of sludge and rough detritus were removed in closed wagons and disposed of at the refuse coup.

Scavenging and Cleansing.—The system of scavenging and cleansing has been the same as in former years, and 1243 loads of ashes and 234 loads of waste-paper were dealt with.

The work of refuse collection has been carefully carried out, and I am glad to be able to report a commendable

improvement which has been effected by the householders in the placing out and taking in of their ash-bins within reasonable limits relative to the times of collection. There is, however, still room for improvement, and I would again request the public to assist in keeping the streets in a cleaner and more tidy condition by observing that the dust-bins contain, as far as practicable, nothing but dry, incombustible refuse, that the receptacle is not over-filled and wherever possible covered with a lid, also that it is not placed out on the street an undue length of time before the arrival of the cart and is taken in as soon as possible after being emptied.

I regret to report that little or no improvement has been effected in the work of street cleansing. The principal streets receive proper and regular attention, but there are occasions when, owing to pressure of other duties, some of the side-streets are neglected and allowed to remain in a most unsatisfactory condition. I would again strongly recommend that the duties of the scavenger be reorganised and a scheme compiled whereby every street would receive regular and systematic cleansing.

The situation of the refuse comp at Wanchope makes it imperative that the depot should receive careful consideration and extraordinary care if satisfactory results are to be obtained. At present the amount of labour expended is not sufficient to achieve satisfactory results; what is required is daily attention, and this is a matter to be considered in conjunction with the duties of the scavenger.

Nuisances.—The usual routine inspections were carried out and a number of nuisances of a minor character were dealt with. In no case was it found necessary to serve a written notice or to ask the Local Authority to institute statutory proceedings.

I would draw attention to the unsatisfactory condition of the sanitary accommodation provided in places of public resort. In almost every case this is totally

inadequate, and an early opportunity ought to be taken to review the position.

There are no closets on the conservaney system, earth closets, or privies within the Burgh. The number of water-closets serving more than one tenant and houses without water and sinks inside the house are as follows :—

Common water-closet serving 2 tenants	....	....	40
Common water-closet serving 3 tenants	...	....	20
Common water-closet serving 4 tenants	...	....	2
Common water-closet serving 5 tenants	....	....	2
Common water-closet serving 6 tenants	..	....	1
Houses without water and sinks inside the house	....		12
Ash-pits serving one house only	...	..	5

The list of houses without water or sinks inside the house was reviewed by the Local Authority during the year, and in every case where the work was considered practicable and expedient the defect was remedied. The remaining 12 cases occur in properties which are condemned or where the work is either impracticable or inexpedient.

Slaughter-houses.—The three private booths licensed by the Local Authority were inspected regularly and found in a satisfactory condition at the dates of visit.

The following carcases were inspected :—206 oxen, 642 sheep, and 9 pigs.

In no case was it found necessary to detain a carcase for inspection by the Meat Inspector.

Burial Grounds.—There are no burial grounds within the Burgh.

Factories and Workshops.—Fifty-two inspections were carried out, and the premises visited were found to be in a satisfactory condition. In no case was it found necessary to serve a written notice for a breach of the Act.

Houses Let in Lodgings and Common Lodging-houses.

There are no common lodging-houses or houses let in lodgings within the Burgh.

Report for the year ended 31st December, 1934, on Proceedings taken as regards the Inspection, Improvement, and Demolition and Closure of Dwelling-houses.

**HOUSING (INSPECTION OF DISTRICT) REGULATIONS
(SCOTLAND), 1928.**

- | | |
|---|-----|
| 1. Number of dwelling-houses inspected | 264 |
| 2. Number of dwelling-houses which on inspection were considered to be in a state so dangerous or injurious to health as to be unfit for human habitation | 30 |

HOUSING (SCOTLAND) ACT, 1925.

- | | |
|--|------|
| 3. Number of cases where intimations were given under Section 20 (1) as to insufficient water-closet accommodation :— | |
| (a) Cases where requirements complied with by owners | nil. |
| (b) Cases where works carried out by Local Authority after failure of owners to do so .. | nil. |
| (c) Cases still pending | nil. |
| 4. Number of houses of (a) one apartment, and (b) two apartments, for the erection of which the consent of the Local Authority has been given in terms of Section one hundred and eleven | nil. |

HOUSING, TOWN PLANNING, &C. (SCOTLAND) ACT, 1919.

- | | |
|---|------|
| 5. Number of cases where notices were served under Section 40 (1) to provide dwelling-houses with water supply :— | |
| (a) Cases where requirements complied with by owners | nil. |
| (b) Cases where works carried out by Local Authority after failure of owners to do so | nil. |
| (c) Cases still pending | nil. |

HOUSING (SCOTLAND) ACT, 1930.

- | | |
|---|------|
| 6. Number of dwelling-houses in respect of which notices were served under Section 14 (1) | nil. |
|---|------|

7. Number of dwelling-houses rendered fit for human habitation following on notices under Section 14 (1)	nil.
8. Number of dwelling-houses in respect of which work has been done by the Local Authority under Section 15 (1)	nil.
9. Number of dwelling-houses in respect of which, in terms of Section 17, a demolition order or closing order under Section 16 (3) has been substituted for a notice under Section 14 (1)	nil.
10. Number of dwelling-houses in respect of which notice were served in terms of Section 16 (1)	12
11. Number of dwelling-houses referred to in 10 :—	
(a) which have been rendered fit for human habitation	nil.
(b) in respect of which undertaking has been given that the house will not be used for human habitation until it has been rendered so fit	12
(c) in respect of which demolition orders have been made under Section 16 (3)	nil.
(d) in respect of which closing orders have been made under Section 16 (3) and (4)	nil.
12. Number of dwelling-houses in respect of which closing orders have, in terms of Section 16 (3), been determined by the Local Authority, following upon the houses having been rendered fit for human habitation	nil.
13. Number of houses in respect of which advances have been made in terms of Section 34 towards cost of repairs and amount so advanced	nil.

There are no slum areas within the Burgh; the houses reported on as unfit for human habitation are scattered, and will be dealt with as individual houses under Part II. of the Act. The housing accommodation generally is of satisfactory standard, and outwith the houses reported on as unfit for human habitation there are no cases of serious

overcrowding. The chief defect observed during my routine inspections was the lack of light and ventilation in attic rooms. In the majority of houses where this defect occurs the occupiers are persons of substantially the same status as rural workers, and in these cases I would recommend to the proprietors the Town Council's scheme in terms of the Rural Workers Act, 1926.

Twelve of the houses reported on as unfit for human habitation have already been closed, and undertakings in terms of Section 16 (2) of the 1930 Act have been accepted from the proprietors. Ten of these families were rehoused in the 1st development of West Street site, and two families made their own arrangements for rehousing. Included in the remaining 18 houses are six occupied by persons of advanced age, and these houses will be closed as soon as they become untenanted. The Town Council have under consideration a further development of West Street site to deal with the other cases. This scheme will be commenced in the early spring, and the houses will be ready for occupation about the end of September, 1935.

LABORATORY REPORTS.

A. CHEMICAL LABORATORY.

Mr Hawley reports as follows :—

The Laboratory meets the administrative requirements of the Counties of Dumfries, Kirkcudbright, and Wigtown, and the Burghs therein. The work may be grouped concisely as under :—

(i) Analyses made for the County Councils in the area, which comprise—

(a) The examination of Water and Sewage.

(b) The examination of Foods and Drugs under the Food and Drugs (Adulteration) Act and associated legislation.

(c) Sundry other examinations.

(ii) The examination of Medicines for the National Health Insurance Committee of the Counties and of the Burgh of Dumfries.

(iii) Analyses for approved institutions and individuals in Dumfries and Galloway.

Groups (a) and (b) comprised 93 per cent. of the 1377 samples received during the year.

ANALYSES MADE FOR THE COUNTY COUNCILS.

(a) Dumfriesshire.

Work for the Public Health Department has continued on the usual lines. Apart from occasional problems of diverse nature which call for special treatment, it comprises the examination of Milk, Water, Sewage, and Sewage Effluents.

Six hundred and fifty samples were submitted, representing 47 per cent. of the total number received in the Laboratory.

MILK.

In connection with the administration of the Milk (Special Designations) Order (Scotland), 1923, which fixes

a minimum standard of 3·5 per cent. for milk fat, the County Veterinary Inspectors submitted 149 samples of milk. 110 of these came from licensed herds. Similar samples received from Kirkcudbrightshire and Wigtownshire may conveniently be considered here. Although no standard is prescribed for Non-fatty Solids, these are determined whenever possible.

Results in the form of quarterly averages are shown in Table No. 1, and with them are included data for Milk taken under the Food and Drugs Act. The latter (with certain exceptions) afford a fair index of the composition of Milk as ordinarily retailed.

Table No. 1.

Graded.					
			Dumfries.	Kirkcudbright and Wigtown.	
Quarter.		Fat.	N.F.S.	Fat.	N.F.S.
1	...	3·62	8·83	3·92	8·54
2	...	3·80	8·85	4·05	8·90
3	...	3·93	8·80	3·78	8·89
4	...	4·19	8·98	3·94	8·88
Year.					
1934	...	3·90	8·86	3·92	8·85
1933	...	4·01	8·87	3·87	8·95
1932	...	3·95	8·85	3·84	8·93

Non-Graded.					
			C.V.I.	Food and Drugs Act.	
		Dfs.	Kbt. and Wig.	Dfs.	Kbt. and Wig.
1	...	3·57	8·73	3·53	8·78*
2	...	3·75	8·81	3·42	8·89
3	...	3·76	9·17	3·55	8·96
4	...	4·25	9·03	3·95	8·94*
Year	...	3·83	8·92	3·63*	8·89*

			All C.V.I.	All Food and Drugs.	
Year	...	3·88	8·88	3·55	8·71

There is a slight decrease in the mean Milk Fat Content in the Dumfriesshire samples. The Kirkcudbright figures show little change from the previous year.

Nine samples involving 8 herds contained less than 3·5 per cent. Milk Fat, with a mean deficiency of ·40 per cent. Similarly in Kirkcudbrightshire and Wigtownshire

* Corrected for samples known to be adulterated.

County.	Article.	Result.
DUMFRIES.	Milk ... 17·6% Added Water.	Plea of Guilty. Fine, £10.
	Mince ... Sulphite Preservative, 1070 p.p.m.	Plea of Guilty. Fine, £7. Case under Section (1).
	Mince ... Sulphite Preservative, 1050 p.p.m.	Plea of Guilty. Fine, £7. Case under Section (1).
	Mince ... Sulphite Preservative, 1030 p.p.m.	Plea of Guilty. Fine, £7. Case under Section (1).
	Sausages ... Sulphite Preservative, 780 p.p.m.	Plea of Guilty. Fine, £4. Case under Section (1).
	Mince ... Sulphite Preservative, 190 p.p.m.	Plea of Guilty. Fine, £3.
	Mince ... Sulphite Preservative, 110 p.p.m.	Plea of Guilty. Fine, £3.
	Mince ... Sulphite Preservative, 70 p.p.m.	Plea of Guilty. Fine, £2.
	Mince ... Sulphite Preservative, 40 p.p.m.	Plea of Guilty. Fine, £2.
	Milk ... Def. Fat—29%	Plea of Guilty. Fine, £4.
KIRKCUDBRIGHT.	Sausages ... Sulphite Preservative, 900 p.p.m.	Plea of Guilty. Fine, £2.
	Mince ... Sulphite Preservative, 300 p.p.m.	Plea of Guilty. Fine, £2.
	Mince ... Sulphite Preservative, 130 p.p.m.	Plea of Guilty. Fine, £2.
	Milk ... Def. Fat, 9% ; Added Water, 17%	Fine, £5.
WIGTOWN.	Sausages ... Sulphite Preservative, 800 p.p.m.	Plea of Guilty. Fine, £3.

Appendix 4.

	Water.	Sewage and Sewage Effluent.	Food and Drugs.	Milk.	Fertilisers and Feeding Stuffs.	Medicines.	Miscellaneous.	Total.
Dumfries County	329	157	186	149	7	...	8	836 (616)
Kirkcudbright County Council	54	...	119	111	...	...	...	284 (352)
Wigtownshire County Council	13	...	100	67	...	...	...	180 (153)
Dumfries County Insurance Committee.	...	...	...	...	...	5	...	5 (5)
Dumfries and Maxwelltown Insurance Committee.	...	...	...	...	...	4	...	4 (4)
Kirkcudbrightshire Insurance Committee.	...	...	...	...	...	3	...	3 (6)
Wigtownshire Insurance Committee.	...	...	...	...	...	2	...	2 (4)
Other Local Authority ...	15	...	...	...	...	...	1	16 } (60)
Private	26	...	...	3	14	...	4	47
Total	437	157	405	330	21	14	13	1377 (1200)
	(417)	(22)	(457)	(253)	(4)	(19)	(28)	

B. BACTERIOLOGICAL LABORATORY.

County Health Office,
County Buildings, Dumfries,

To The County Medical Officer, 26th June, 1935.
County Buildings, Dumfries.

Sir,

I beg to submit my report for the Bacteriological work performed in this laboratory during 1934.

During the twelve months ending 31st December 6089 bacteriological examinations were made, being an increase of 423 on the figure of the previous year.

For the purpose of comparing the figures of examinations made during 1934 and 1933, the following data are given :—

	1934.	1933.	Increase or Decrease	
Swabs for Diphtheria	2207	1269	938	.....
Sputa	381	398	.....	17
Widals	146	224	.....	78
Blood Culture	7	10	.....	3
Blood Examinations	84	89	.....	5
Cerebro-Spinal Fluid	51	28	23	.....
Fæces	65	177	.....	112
Urines	255	340	.....	85
Pus and Pathological Fluids	91	70	21	.....
Miscellaneous	55	173	.....	118
Wassermann	301	243	58	.....
Gonococci	346	316	30	.....
Milk	1306	1555	.....	249
Water	315	339	.....	24
Cows' Sputa	281	338	.....	57
Anthrax	183	82	101	.....
Vaccines	15	15	.....	.....
Total	6089	5666	1171	748

Swabs for Diphtheria.—These have been taken for the purpose of diagnosis, of determining the length of treatment, and of detecting carriers. They are not a true index of the amount of Diphtheria present in the area, as in some

cases it is necessary to take six or seven, or even more, swabs before reporting that the throat is free from *C. Diphtheriæ*. Large variations may be expected from year to year. The year 1934 shows an increase of 938. The number of swabs taken in the County of Dumfriesshire rose from 517 to 1350. In the area outwith the County served by this laboratory the number of swabs submitted in the same period has risen from 752 to 857.

Sputa shows a decrease of 17.

Of the total of 381, 335 were examinations for the tubercle bacillus, the remaining 46 being for the determination of the causal organisms in respiratory diseases.

Widal's reaction, i.e., agglutination tests for bacilli of the enteric group, shows a decrease on the number done last year.

Venereal Diseases.—To help with the detection of this in suspected patients, 346 examinations were for Gonococci, and 301 Wassermanns were done. Both these figures show definite increases.

Milk.—The examinations for Milk show a decrease due to a lesser number of examinations being made for outside sources. Of the 1306 examinations done, 834 were done for the County Authorities and 472 for outside sources. The figures for last year were 694 for the County Authorities and 861 for outside sources. As regards Dumfriesshire, these milks taken from various sources were subjected to examinations for (1) Bacterial count, (2) Presence of tubercle bacillus, (3) Presence of other pathogenic organisms, e.g., the causal organism of mastitis. Examinations for the tubercle bacillus numbered 356, of which 4 were positive. These figures are not an index of bovine tuberculosis, as animals which are obviously tuberculous from a clinical point of view are often taken under the Tuberculosis Order without a bacteriological examination. The samples submitted are usually those in which there is an element of doubt.

Two hundred and two milks were tested for organisms other than tubercle bacilli and 276 milks for bacterial

count. Out of this latter number 106 were for the purpose of testing graded milks and 170 for testing non-graded milks. Separate tables showing details of bacterial counts are given.

The following bacteriological standards for graded milk have been prescribed by the Scottish Department of Health :—

Certified.—The milk must not contain more than 30,000 organisms per c.e., or any *Bacillus Coli* in 1/10th of a c.e.

Grade A (Tuberculin Tested) and Grade A.—The milk must not contain more than 200,000 organisms per c.e., or any *Bacillus Coli* in 1/100th of a c.e.

Anthrax.—The total number of examinations done shows a marked increase, being 183 as compared with 82 last year. There were 7 positive results.

Cows' Sputa.—281 Cows' Sputa were examined, of which 202 were done for the County Authorities. Of this total of 202, 36 were positive.

Histological examinations of tissues still continue, but owing to the small number done they are now grouped among the miscellaneous examinations.

Waters.—315 samples were examined, and of this number 61 were done for the Stewartry, 7 for Wigtownshire, and 19 for private individuals. The remaining 228 consisted of quarterly examinations of the supplies to the Special Water Districts and of other waters used, or intended for use as, domestic supplies. A table has been drawn up showing the results of examinations of Special Water District Supplies, so far as the presence of Coliform Bacilli is concerned.

A table has been drawn up showing the sources of pathological material and the material submitted.

I have the honour to be, Sir,

Your obedient Servant,

EDWARD ARMSTRONG.

WATER SUPPLIES TO THE SPECIAL WATER DISTRICTS.

Smallest amount (in c.cs.) of Sample in which Coliform Bacilli were detected.

— Indicate Coliform Bacilli absent from 100 c.cs.

Quarters.	I.	II.	III.	IV.
Lower Annandale ...	{ — 10 c.cs.	{ 100 c.cs. 10 c.cs.	{ — 100 c.cs.	{ 10 c.cs. 100 c.cs.
Bankshill ...	—	1 c.c.	100 c.cs.	100 c.cs.
Blackshaw ...	—	—	—	—
Crawick... ..	—	10 c.cs.	10 c.cs.	100 c.cs.
Dumfries (Landward)	—	10 c.cs.	—	100 c.cs.
Eaglesfield ...	—	0·1 c.c.	100 c.cs.	10 c.cs.
Ecclefechan ...	—	100 c.cs.	—	100 c.cs.
Glencaple ...	100 c.cs.	100 c.cs.	1 c.c.	100 c.cs.
Kirkconnel ...	{ 1 c.c. 100 c.cs.	{ 10 c.cs. 0·1 c.c.	{ 10 c.cs. 10 c.cs.	{ 10 c.cs. 100 c.cs.
Lockerbie Bugh ...	Not done.	10 c.cs.	Not done	100 c.cs.
Moniaive ...	10 c.cs.	—	10 c.cs.	—
Netherwood, Kolton, & Craigs ...	100 c.cs.	100 c.cs.	—	100 c.cs.
Penpont ...	—	100 c.cs.	—	100 c.cs.
Ruthwell and Raffles ...	—	10 c.cs.	100 c.cs.	—
Rowanburn ...	100 c.cs.	1 c.c.	1 c.c.	100 c.cs.
Thornhill ...	0·1 c.c.	10 c.cs.	1 c.c.	100 c.cs.

B. COLL.

Microbes per c.c.	No. of Samples.	B. COLL.					
		Absent from 0.1 c.c.		Present in 0.1 c.c.		Present in 0.01 c.c.	
		No.	Per cent.	No.	Per cent.	No.	Per cent.
Under 30,000	87	77	72.64	8	7.55	1	.94
Over 30,000 and under 200,000	11	8	7.55	1	.94	2	1.89
Over 200,000	8	2	1.89	1	.94	2	1.89
Total	106	87	82.08	10	9.43	5	4.72
						4	3.77

NON-GRADED MILKS.

B. COLL.

Microbes per c.c.	No of Samples.	B. COLL.					
		Absent from 0.1 c.c.		Present in 0.1 c.c.		Present in 0.01 c.c.	
		No.	Per cent.	No.	Per cent.	No.	Per cent.
Under 30,000	66	42	24.71	13	7.65	9	5.29
Over 30,000 and under 200,000	44	20	11.76	13	7.65	6	3.53
Over 200,000	60	3	1.76	5	2.94	13	7.65
Total	170	65	38.23	31	18.24	28	16.47
						46	27.06

TABLE SHEWING SPECIMENS SUBMITTED AND
SOURCE OF SUPPLY.

	Dumfries County.	V.D. Clinic.	Dumfries Burgh.	Stowarity of Kirkcud- bright.	Wigtown County.	Dumfries and Galloway Royal Infirmary.	Private.	Total
Swabs (Diphtheria) ...	1350	...	212	147	484	14	...	2207
Sputa	152	...	131	57	33	7	1	381
Widals	49	...	...	40	32	25	...	146
Blood Cultures	1	...	1	1	3	1	...	7
Blood Examinations	29	...	20	9	2	12	12	84
Corebro-Spinal Fluid	8	...	...	14	...	23	6	51
Fæces	18	...	10	2	32	3	...	65
Urines	40	...	123	35	33	15	9	255
Pus and Pathological Fluids	39	...	7	14	3	28	...	91
Miscellaneous	19	...	1	27	1	4	3	55
Wassermann	30	106	72	19	16	58	...	301
Gonococci	27	250	34	20	14	1	...	346
Milk	834	...	...	290	176	1	5	1306
Water	228	...	...	61	7	...	19	315
Cows' Sputa	202	...	...	79	...	...	...	281
Anthrax	183	...	...	...	...	...	...	183
Vaccines ... ..	...	...	...	...	...	...	15	15
Total	3209	356	611	815	836	192	70	6089

REPORT

ON

MEDICAL INSPECTION

Report on the Medical Inspection of School Children

For the Year ending 31st July, 1935.

I.—List of Staff.

Chief School Medical Officer.

JOHN RITCHIE, M.B., Ch.B., M.R.C.P.E., D.P.H.

Assistant School Medical Officers.

E. B. MUNRO, O.B.E., M.B., Ch.B., D.P.H., Lieut.-Col.
I.M.S. (Retd.).

AGNES F. TURNER, M.B., Ch.B., D.P.H.

School Dentist.

AGNES J. DALZIEL, L.D.S.

Consulting Oculist.

JAMES A. ROSS, M.A., M.B., Ch.B., Carlisle.

II. (a).—Number of Schools.

The number of schools under medical inspection is 100.

(b) Number of Children.

The average number of children on the roll was 13,571.

III.—Number of Routine Visits to Schools.

The number of routine visits to schools for systematic examination was 298.

IV.—Number of Special Visits.

(A whole day comprises two visits.)

For Examination of Errors of Refraction	25
For Examination for Infectious Diseases	6
For Examination for Physical or Mental Defect	52
For Examination of Verminous Children, Absence from School, etc.	5
	—
	88

V.—Sanitary Conditions of Schools.

A. LIGHTING.

Rooms in four schools were noted as being badly lit—Burnhead; Carronbridge, senior room; Kirkconnel, four in the old building; and Noblehill. In one case this was due to the overgrowth of trees in the playground (Burnhead).

Electric light has been installed in many of the schools in the County and Burgh of Dumfries. There are still three Burgh schools lit by gas—Noblehill, St. Andrew's, and Maxwelltown (the latter is about to be wired for electricity).

B. VENTILATION.

In one school (Moniaive) many windows will not open, and ventilation consequently is inefficient. The infant department of Langholm Academy is draughty.

C. HEATING.

Six country schools were noted this year as being particularly cold (Birleyhill, Breconbeds, Brydekirk, Eskdalemuir, Half-Morton, Trailtrow). In Lochmaben School the technical block is insufficiently heated; there is central heating.

Stoves smoke in Durisdeer (both rooms) and in Glenzier. In the former the stoves require repair or renewal.

Open fires smoke in Johnstonebridge (senior room) and in Kirkconnel (old building).

In the dining-room of Loekerbie Academy the stove requires repair or renewal.

In Maxwelltown Senior School fumes were noted in the headmaster's room, which is situated immediately above the furnace.

D. CLEANSING AND DISINFECTION.

Thirty-three schools have been wholly or partially redecorated or elosets white-washed; and three school-houses have been redecorated.

E. WATER SUPPLY.

The water supply for schools or schoolhouses is said to go short at times at Canonbie, Dalton, Dumgree, and Durisdeer. The pressure is said to be insufficient at Auldgirth and Hutton Hall. Sediment after rain has been noted at Middlebie and Wallacehall.

F. SANITARY CONVENIENCES.

Water-elosets have been installed during the year at Tynron Endowed School: alterations or repairs have been carried out in seven schools (Dunscore, Durisdeer, Loekerbie Academy, Tundergarth, Barndennoch, Langholm Academy, Canonbie).

Renovation or reconditioning of latrines is required in Loehmaben and Sanquhar Academy. The trough closet at Carronbridge is not always in a cleanly condition, as the burn diverted to run through it is low in dry weather.

Latrines, both water and dry closets, were with a few exceptions found in a cleanly condition.

Wash-hand basins have been supplied or replaced in Annan Academy, Middlebie, and Trailltown; new ones are required in St. Michael's.

In Moniaive the cloakroom accommodation was noted as being insufficient.

G. PLAYGROUNDS.

Playground surfaces continue to be a cause of dissatisfaction. In a considerable number a portion might be covered with tarmacadam or other suitable material for the purpose of taking the physical instruction class in the open air.

One playground (Hutton) is noted as being dangerous for the children, as it is open to the public road near a corner.

A covered shed is required in Ruthwell; in Hutton Hall the boys' shed is very dusty, and would be improved by having the floor cemented.

H. DESKS.

In Maxwelltown Junior School some desks are unsuitable, being of the fixed type in a galleried room, causing the relative height of seat and desk to be inconvenient.

I. MISCELLANEOUS.

During the year a large new addition to Dumfries High School has been opened and the old block reconditioned.

New floors have been laid in four schools—Enterkinfoot, Goodhope, Hutton, Wamphray—and are required in Harlaw.

VI.—Organisation and Administration.

A. SYSTEM OF MEDICAL EXAMINATION.

The Department of Health requires the examination of each pupil at least three times during school life:—

- (1) As soon as possible after admission to school —
“Entrants.”
- (2) During the intermediate stages (ages 9, 10, 11) —
“Intermediates.”
- (3) Towards the end of the elementary school period —
“Leavers.”

The instruction by the Department of Health, “That every school be examined twice yearly at reasonable

intervals," has been carried out except in the case of Megdale, which was examined once only.

B. SCHOOL NURSES.

The District Nurse or Health Visitors are present, as far as possible, at medical inspections.

C. ARRANGEMENTS FOR "FOLLOWING UP."

The table below gives details :—

Nursing Association.	Cases notified.	Cases visited.	Number of reports.
Annan	143	143	284
Lower Annandale	99	94	254
Canonbie	16	16	23
Carrutherstown	19	19	52
Cumberland	13	13	19
Dumfries Landward	7	6	19
Dunseore	15	15	34
Eskdale and Langholm	19	20*	41
Kirkeonnel	79	81*	182
Kirkmahoe	4	5*	19
Kirkniehael	13	13	27
Loehmaben	28	28	50
Lockerbie	46	46	47
Moffat	31	31	54
Moniaive	1	1	2
Penpont	16	16	27
Ruthwell	4	4	11
Sanquhar	41	41	68
Stewartry	3	.....	.....
Thornhill	53	53	116
<hr/>			
Total	650	645	1339
Health Visitors	482	735*	2233
<hr/>			
Grand Total	1132	1380	3572
<hr/>			

* Includes cases referred by teachers or parents to Nurses or Health Visitors.

D. SUPERVISION OF INFECTIOUS DISEASE.

E. CO-ORDINATION WITH PUBLIC HEALTH SERVICE.

The arrangements under headings D. and E. are described in former reports.

VII.—Physical Condition of School Children.

A. TOTAL NUMBER EXAMINED.

(a) At Systematic Examinations.

Age.				Boys.	Girls.	Total.
Under 5 years	.....	.....		55	59	114
Age 5	„	.....	.....	584	538	1122
„ 6	„	.....	.....	88	99	187
„ 7	„	.....	.....	25	28	53
„ 8	„	.....	.....	32	29	61
„ 9	„	.....	.....	723	635	1358
„ 10	„	.....	.....	31	27	58
„ 11	„	.....	.....	19	22	41
„ 12	„	.....	.....	28	30	58
„ 13	„	.....	.....	750	615	1365
„ 14	„	.....	.....	25	14	39
„ 15	„	.....	.....	3	4	7
„ 16 and over	.....	.....		37	34	71
Total				2400	2134	4534

Grouping the total number as Entrants, Intermediates, and Leavers, the figures are :—

	Boys.	Girls.	Total.
Entrants	784	753	1537
Intermediates	773	684	1457
Leavers	843	697	1540
	2400	2134	4534

(b) Special Cases.

There were 6530 children examined as special cases as follows :—

Re-examination of Notified Defects	2578
Vision Testing at age 7	1245
Re-examination of Pediculosis Cases	1878
At the request of Parent or Teacher	258
At the request of the School Medical Officer*	52
For Infectious Disease	303
For Mental and Physical Defect	216
Total	6530

* Includes children boarded out by the County Council.

B. NUMBER OF CHILDREN NOTIFIED TO PARENTS AS SUFFERING FROM DEFECTS AND PEDICULOSIS.

Total number examined, 11,064.

Number Notified.	Defects—%	Pediculosis—%
(a) At Systematic examinations	306	214
(b) Special cases	363	432
	6.04	5.83

Number showing no defects at the Systematic examination was 299=6.59 per cent.

N.B.—A defective tooth, weight below the average, etc., count as “defects.”

C. THE NUMBER OF CHILDREN WITH NOTIFIED DEFECTS
RECEIVING ATTENTION.

		No. Improved.	Per cent.
Number Re-examined :—			
(a) At Systematic Examinations	301	154	} 64.39
(b) As Special Cases	2578	1700	
Pediculosis Cases	2078	1530	73.62

D. AND E. CLOTHING AND FOOTGEAR.

Number Ex mined.	Underclad.		Overclad.		Clothing Dirty.		Unsatis- factory Footgear.	
	No.	%	No.	%	No.	%	No.	%
Boys 2400	2	0.08	...		3	0.12	3	0.12
Girls 2134	...		2	0.09	6	0.28	1	0.04
Total 4534	2	0.04	2	0.04	9	0.19	4	0.08
Specials ...	9		2		44		11	

F. AVERAGE HEIGHTS AND WEIGHTS.

Before weighing children, boots, shoes, and heavy outer garments are removed.

The following tables show the average heights and weights of boys and girls of all ages from 3 to 16 years :

Boys.

Age.	Number Examined	Average Heights in Inches.		Average Weights in Lbs.	
		Dumfries-shire.	Anthropo-metric Standard.	Dumfries-shire.	Anthropo-metric Standard.
Under 5	55	40.86	...	40.13	...
5- 6	584	44.31	41.03	42.38	39.90
6- 7	88	44.56	44.00	46.28	44.40
7- 8	25	47.64	45.95	53.55	49.70
8- 9	32	49.21	47.05	58.00	54.90
9-10	723	50.90	49.70	58.65	60.40
10-11	31	52.56	51.84	67.98	67.50
11-12	19	55.46	53.50	75.64	72.00
12-13	28	56.88	54.99	82.64	76.70
13-14	750	58.07	56.91	86.99	82.60
14-15	25	61.01	...	96.23	...
15-16	3	66.08	...	119.58	...
over 16	37	66.85	...	128.49	...

GIRLS.

Age.	Number Examined	Average Heights in Inches.		Average Weights in Lbs.	
		Dumfries-shire.	Anthropo-metric Standard.	Dumfries-shire.	Anthropo-metric Standard.
Under 5	59	40.45	...	37.86	...
5- 6	538	42.06	40.55	40.27	39.20
6- 7	99	42.83	42.58	42.63	41.72
7- 8	28	47.22	44.45	50.53	47.50
8- 9	29	48.31	46.60	53.58	52.10
9-10	635	50.54	48.72	59.01	55.50
10-11	27	52.74	51.66	64.90	62.00
11-12	22	53.96	53.12	71.35	68.10
12-13	30	58.15	55.66	87.98	76.40
13-14	615	59.12	57.77	91.44	87.20
14-15	14	60.78	...	92.94	...
15-16	4	64.25	...	121.62	...
over 16	34	63.31	...	120.28	...

G. CLEANLINESS.

Pediculosis may be taken as a measure of this.

Number Examined.		Head.				Body.		Specials.
		Notified Cases.		Slight.				
		No.	%	No.	%	No.	%	No.
Boys	2400	35	1·45	39	1·62	1	0·04	413
Girls	2134	178	8·34	206	9·65	...		1465
Total	4534	213	4·69	245	5·40	1	0·02	1878

H. CONDITION OF THE SKIN.

(a) Head.

Number Examined.			Ringworm.		Impetigo.		Other Diseases.	
			No.	%	No.	%	No.	%
Boys	...	2400	...	...	11	0·45	13	0·54
Girls	...	2134	...	...	10	0·46	5	0·23
Total	...	4534	...	...	21	0·46	18	0·39
Specials	...		3		46		10	

(b) BODY.

Number Examined.		Ringworm.		Impetigo.		Scabies.		Other Diseases.	
		No.	%	No.	%	No.	%	No.	%
Boys	2400	...	...	...	..	3	0·12	42	1·75
Girls	2134	...	...	1	0·04	2	0·09	15	0·70
Total	4534	...	...	1	0·02	5	0·11	57	1·25
Specials		2		1		30		19	

I. NUTRITION.

Number Examined.		Above Average.		Average.		Below Average.		Very Bad.	
		No.	%	No.	%	No.	%	No.	%
Boys	2400	902	37.58	763	31.79	727	30.29	8	0.3
Girls	2134	852	39.92	703	32.94	573	26.85	6	0.28
Total	4534	1754	38.68	1466	32.33	1300	28.67	14	0.30
Specials	...	...		...		...		1	

J. TEETH.

Number Examined.		All Sound.		1 to 4 Decayed.		5 or more Decayed.		Oral Sepsis	
		No.	%	No.	%	No.	%	No.	%
Boys	2400	563	23.45	1399	58.29	438	18.25	...	
Girls	2134	487	22.82	1237	57.96	410	19.21	...	
Total	4534	1050	23.15	2636	58.13	848	18.70	...	
Specials	...	...		...		...		...

K. NOSE, THROAT. AND GLANDS.

(a) NOSE.

Number Examined.				Catarrh.		Obstruction.		Other Diseases.	
				No.	%	No.	%	No.	%
Boys	...	...	2400	63	2.62	7	0.29	1	0.04
Girls	...	...	2134	59	2.76	6	0.28	...	...
Total	...	...	4534	122	2.69	13	0.28	1	0.02
Specials	...	...	...	14		22		2	

(b) THROAT.

Number Examined.	Tonsils.				Adenoids.				Other Diseases	
	Slightly Enlarged.		Markedly Enlarged.		Probably Present.		Present.			
	No.	%	No.	%	No.	%	No.	%	No.	%
Boys 2400	353	14.70	64	2.6	36	1.50	1	0.04	2	0.08
Girls 2134	328	15.37	80	3.74	30	1.40	1	0.04	2	0.09
Total 4534	681	15.00	144	3.17	66	1.47	2	0.04	4	0.08
Specials	9		578		127		11		7	

(c) LYMPHATIC GLANDS.

Number Examined.	Palpably Enlarged.		Markedly Enlarged.		Suppurating.		Cicatrices.	
	No.	%	No.	%	No.	%	No.	%
Boys 2400	664	27.6	7	0.29	...		28	1.16
Girls 2134	468	21.93	3	0.14	1	0.04	26	1.21
Total 4534	1132	24.96	10	0.22	1	0.02	54	1.19
Specials ...	10		57		2		...	

L. EXTERNAL EYE DISEASES.

Number Examined.	Blepharitis.		Conjunctivitis.		Corneal Opacity.		Strabismus.		Other Diseases.	
	No.	%	No.	%	No.	%	No.	%	No.	%
Boys 2400	14	0.58	5	0.20	5	0.20	25	1.04	11	0.45
Girls 2134	11	0.51	2	0.09	3	0.14	38	1.78	4	0.18
Total 4534	25	0.55	7	0.15	8	0.17	63	1.38	15	0.33
Specials	36		13		12		302		24	

M. VISUAL ACUITY.

Tested in children of 7 years and over.

Number Examined.		Good, 6/6.		Fair, 6/9-6/12.		6/18 or Worse.		Bad in one Eye only.	
		No.	%	No.	%	No.	%	No.	%
Boys	2259	1100	48.69	943	41.74	84	3.71	132	5.84
Girls	2061	913	44.29	912	44.25	135	6.55	101	4.90
Total	4320	2013	46.59	1855	42.93	219	5.06	233	5.39
Specials	...	3		60		734		160	

The number of retinoscopies performed was 257, of which 55 were by Dr Ross of Carlisle, and 202 by the School Medical Officers. Arising out of this, 171 parents were notified that their children required glasses. Of these :—

84 declared themselves necessitous.

71 paid for glasses.

4 requested that prescriptions be sent to them.

12 did not reply.

Of the remaining 86 retinoscopies, 33 were duplicate examinations of those children referred to Dr Ross ; 43 were of children who, after examination, were found not to require glasses ; and 10 were of children who did not require their glasses to be changed.

N. EARS.

Number Examined.	Otorrhœa.		Wax.		Other Diseases.	
	No.	%	No.	%	No.	%
Boys ... 2400	11	0.45	24	1.00	4	0.16
Girls ... 2134	8	0.37	8	0.37	...	
Total ... 4534	19	0.41	32	0.70	4	0.08
Specials	83		5		1	

O. HEARING.

Number Examined.	Slightly Deaf.		Markedly Deaf.	
	No.	%	No.	%
Boy 2400	10	0.41	2	0.08
Girls 2134	5	0.23	5	0.23
Total 4534	15	0.33	7	0.15
Specials	7		15	

P. SPEECH.

Number Examined.	Defective Articulation.		Stammering.	
	No.	%	No.	%
Boys ... 2400	11	0.45	9	0.37
Girls ... 2134	7	0.32	3	0.14
Total ... 4534	18	0.39	12	0.26
Specials	3		...	

Q. MENTAL CONDITION.

Number Examined.	Dull or Backward.		Mentally Defective.	
	No.	%	No.	%
Boys 2400	36	1.50	16	0.6
Girls 2134	23	1.07	7	0.32
Total ... 4534	59	1.30	23	0.50
Specials	8		26	

During the year a third special class was opened in Lockerbie Academy.

There are 61 mental defectives on the roll of the special classes.

The School Medical Officers have paid 12 visits to special classes during the year.

The number of mental tests performed was 67, and 15 children were certified mentally defective.

R. HEART AND CIRCULATION.

Number Examined.	Organic Disease.				Functional Diseases.		Anæmia.	
	Congenital.		Acquired.					
	No.	%	No.	%	No.	%	No.	%
Boys 2400	1	0.04	63	2.62	78	3.25	15	0.62
Girls 2134	3	0.14	18	0.84	85	3.98	11	0.51
Total 4534	4	0.08	81	1.78	163	3.59	26	0.57
Specials ...	5		167		230		46	

S. LUNGS.

Number. Examined.	Bronchitis and Catarrh.		Tuber- culosis.		Suspected Tuberculosis.		Tuberculosis Contacts and other Lung Diseases.	
	No.	%	No.	%	No.	%	No.	%
Boys 2400	52	2.16	...		10	0.41	14	0.58
Girls 2134	45	2.10	4	0.18	5	0.23	5	0.23
Total 4534	97	2.13	4	0.08	15	0.33	19	0.41
Specials ...	34		16		53		60	

T. NERVOUS SYSTEM.

Number Examined.	Epilepsy.		Chorea.		Infantil Paralysis.		Other Diseases	
	No.	%	No.	%	No.	%	No.	%
Boys 2400	1	0.04	...		1	0.04	4	0.16
Girls 2134	...		...		2	0.09	...	
Total 4534	1	0.02	...		3	0.06	4	0.08
Specials ...	10		3		6		8	

U. TUBERCULOSIS (NON-PULMONARY).

Number Examined.	Glandular.		Bones and Joints.		Abdominal.		Skin.	
	No.	%	No.	%	No.	%	No.	%
Boys 2400	...		4	0.16	1	0.04	...	
Girls 2134	3	0.14	5	0.23	1	0.04	...	
Total 4534	3	0.06	9	0.19	2	0.04	...	
Specials ...	25		19		25		5	

V. RICKETS.

Number Examined.	Slight.		Marked.	
	No.	%	No.	%
Boys 2400	36	1.50	7	0.29
Girls 2134	6	0.28	1	0.04
Total 4534	42	0.92	8	0.17
Specials ... ..	...		1	

W. DEFORMITIES.

Number Examined.	Congenital.		Acquired (non-Rachitic).	
	No.	%	No.	%
Boys 2400	13	0.54	13	0.54
Girls 2134	10	0.46	27	1.26
Total 4534	23	0.50	40	0.88
Specials	6		8	

X. INFECTIOUS AND CONTAGIOUS DISEASES.

Number Examined.	Whooping-cough.		Chicken-pox.		Scarlet Fever.	
	No.	%	No.	%	No.	%
Boys 2400	2	...	1	0.04	1	...
Girls 2134			...			
Total 4534	2	0.04	1	0.02	1	0.02
Specials	2		1		...	

Y. OTHER DISEASES OR DEFECTS.

Number Examined.				Number.	Per cent.
Boys	...	...	2400	55	2·29
Girls	...	...	2134	51	2·38
Total	...	...	4534	106	2·33
Specials	...	...	...	99	...

Z. VACCINATION.

Number Examined.				No Marks.	Per cent.
Boys	...	...	2400	753	31·37
Girls	...	...	2134	684	32·05
Total	...	...	4534	1437	31·69

REPORT

ON

DENTAL TREATMENT

Report by the School Dentist.

1st Quarter :—August, September, and October, 1934.

Inspection :—Children between 5 and 10 years.

Ewes.	Kirkeonnel.	Cogrieburn.
Johnstonebridge.	Shieldhill.	Sibbaldbie.
Tundergarth.	Corrie.	Mount Pleasant.
Gretna Public.	Trailtrow.	Cummertrees.
Brydekirk.	Breeonbeds.	Hollywood.
Steilston.	Megdale.	Westerkirk.
Canonbie.	Harlaw.	Gilnockie.
Wamphray.	Evan Water.	Gubhill.
Moffat Academy.	Wanlockhead.	Gretna Township.
Wauchope.	Langholm Acad.	Mennock.
Davington.	Eskdalemuir.	Hutton.
Penpout.	Keir.	Bardeunoch.

Treatment :—

Ewes.	Kirkconnel.	Cogrieburn.
Johnstonebridge.	Shieldhill.	Sibbaldbie.
Tundergarth.	Corrie.	Mount Pleasant.
Gretna Public.	Trailtrow.	Cummertrees.
Brydekirk.	Breeonbeds.	Hollywood.
Steilston.	Megdale.	Westerkirk.
Canonbie.	Harlaw.	Gilnockie.
Wamphray.	Evan Water.	Gubhill.
Moffat Academy.	Wanlockhead.	

**2nd Quarter :—November and December, 1934, and
January, 1935.**

*Inspection :—*Children between 5 and 10 years.

Glencaple.	Hutton Hall.	Middlebie.
Hoddam.	Garrel.	Applegarth.
Amisfield.	Nethermill.	Torthorwald.
Goodhope.	Noblehill.	Half-Morton.
Kirk.-Fleming.	Glenzier.	Tynron Public.
Tynron Endowed.	Crossford.	Gair.
Dunscore.	Speddoch.	Glenesslin.
Collin.	Catherinefield.	Duncow.
Moniaive.	Craigmue.	Burnhead.
Dalswinton.	Eaglesfield.	

Treatment :—

Wauchope.	Langholm Acad.	Mennock.
Davington.	Eskdalemuir.	Hutton.
Penpont.	Keir.	Barndennoch.
Gretna Township.	Glencaple.	Hutton Hall.
Middlebie.	Hoddam.	Garrel.
Applegarth.	Amisfield.	Nethermill.
Torthorwald.	Goodhope.	Noblehill.
Half-Morton.	Kirk.-Fleming.	Glenzier.
Tynron Public.	Tynron Endowed.	Crossford.
Gair.	Dunscore.	

3rd Quarter :—February, March, and April, 1935.

*Inspection :—*Children between 5 and 10 years.

Brownhall.	St. Andrew's R.C.	St. Michael's.
Loreburn-St. John's.	Eastriggs.	Morton.
Birleyhill.	Woodside.	Ruthwell.
Hottsbridge.	St. Mungo.	Maxwelltown.
Mouswald.	Dalton.	Carronbridge.
Durisdcer.	Enterkinfoot.	Hightae.
Gatelawbridge.	Lochmaben.	

Treatment :—

Speddoch.	Duncow.	Moniaive.
Catherinefield.	Burnhead.	Dalswinton.
Craigmuie.	Brownhall.	St. Andrew's R.C.
Eaglesfield.	Loreburn-St. John's.	Eastriggs.
St. Michael's.	Birleyhill.	Woodside.
Morton.	Hottsbridge.	St. Mungo.
Glencesslin.	Collin.	

4th Quarter :—May, June, and July, 1935.

*Inspection :—*Children between 5 and 10 years.

Wallacehall Acad,	Auldgirth.	Templand.
Lockerbie Academy.	Cairn.	Kelloholm.
Beattock.	Dumgree.	

Treatment :—

Ruthwell.	Mouswald.	Dalton.
Maxwelltown.	Durisdcer.	Enterkinfoot.
Carronbridge.	Gatclawbridge.	Lochmaben.
Hightae.	Wallacehall Acad.	Auldgirth.
Templand.	Lockerbie Acad.	Cairn.
Kelloholm.	Beattock.	Dumgree.

Summary of Work Done.

Number of schools visited for inspection	93
Number of schools visited for treatment	93
Number of children inspected	5661
Number of children requiring treatment	2586 (45·68%)
Number of children not requiring treatment	3075 (54·32%)

Of those requiring treatment, 1606 (63·98%) accepted the Dentist's services. In 904 cases treatment was refused, and 76 forms were not returned. 57 of those accepting treatment were absent from school on the day of the Dentist's visit, and did not receive treatment. To the

1549 routine cases treated should be added 153 special cases, making a total of 1702 children receiving treatment.

The operative procedures undertaken were :—

Number of Fillings	....	....	....	....	....	381
Number of Sealings	....	....	....	....	....	8
Number of Extractions	....	....	....	....	....	3469

Percentage of Acceptance of Dental Treatment.

100% — Middlebie, Garrel, Applegarth, Lockerbie Academy Special Class, Tynron Public, Crossford, Speddoch, Craigmue, Birleyhill, Gatelawbridge.

90-80% — Sibbaldbie, Half-Morton (88·8), Beattock (86·21), Mennock, Eskdalemuir (85·71), Durisdeer (84·62), Holywood (84·21), Kelloholm (83·96), Burnhead, Canonbie (83·3), Hoddam (82·2), Mouswald, Dalswinton (81·81), St. Mungo, Mount Pleasant (81·25), Dunscore (80·95), Harlaw, Evan Water, Glencaple, Keir (80).

80-70% — Wallacehall Academy (78·57), Kirkconuel (78·28), Steilston (77·7), Wanlockhead (77·14), Wamphray (76·19), Megdale (75), Penpont (73·3), Brydekirk (70·59), Hightae (70).

70-60% — Lockerbie Academy, Loreburn-St. John's Special Class (69·23), Carronbridge (68·75), Moniaive (68·18), Eastriggs (67·16), Woodside, Hutton, Goodhope (66·6), Gretna Township (65·89), Johnstonebridge (64·71), Brownhall, Barndennoch (63·63), Duncow (63·16), Corrie, Gubhill, Gretna Public (62·5), St. Andrew's (61·72), Tundergarth, Morton (61·54), Nethermill, Tynron Endowed, Glen-esslin (60).

60-50% — Noblehill (58·94), Trailtrow (57·14), St. Michael's (56·36), Hutton Hall (56·25), Davington, Wauchope (55·5), Eaglesfield (55·17), Catherinefield, Brecon-

beds, Templand (53·85), Loreburn-St. John's (52·05), Maxwelltown (51·05), Moffat Academy (50·6), Ewes, Cairn (50).

50-40% — Ruthwell (47·83), Cummertrees (47·06), Torthorwald (46·6), Lochmaben (46·29), Glenzier (44·4), Kirkpatrick-Fleming, Amisfield (43·75), Dalton (43·48), Auldgirth (42·86), Langholm Academy (40·32).

40-30%—Hottsbridge (37·5), Westerkirk (36·36), Gilmockie, Cogrieburn, Gair (33·3).

30-20%—Enterkinfoot (25).

20-10%—Dumgree (20), Collin, Shieldhill (14·29).